AGRARIAN REFORM AND AGRICULTURAL DEVELOPMENT: THE CASE OF HONDURAS

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To Efrain Alberto
my son, with love.

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PART I.

AGRARIAN REFORM AND AGRICULTURAL DEVELOPMENT

CHAPTER I

INTRODUCTION

During recent years the increasing attention given to problems of economic development has been paralleled by a rising concern for the improvement of land tenure conditions in world agriculture. This refocusing of attention is based upon the belief that present land tenure structures constitute an obstacle to the social and economic development of many countries and as such must be improved.

In spite of this general recognition of the problem by social scientists, a body of theory to guide economic analysis is lacking. There are rigidly held dogmas and ideological approaches that pass as theories. But the fact remains that modern economics has not come to gripes with the problems of agrarian reform.

This apparent contradiction is difficult to understand because the inclusion of agrarian reform programs figure prominently in the formulation of studies and plans for economic development, foreign aid, etc. Yet its inclusion as a measure that needs to be implemented issometimes done reluctantly. It is often treated as a quasi-economic issue falling outside the realm of economics. In this regard, Philip M. Raup said:

> A primary reason for hesitancy is the general unwillingness of economists to tamper with broad organizational and structural frameworks within which economic activity occurs. Available theories of economic behavior have emerged from the systematic study of firms and individuals. Built into these theories is the strong tendency to hold the institutional framework stable in order that analysis of the response of firms and individuals to economic stimuli can be reduced to manageable proportions.[1]

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[1] P.M. Raup, "The Contribution of Land Reforms to Agricultural Development: An Analytical Framework", Economic and Cultural Change, XII (October, 1963), 2.

The static nature of economic analysis is generally recognized. This recognition has led to the formulation of what is known as economic dynamics which takes time into the analysis. Yet both are practiced within a static institutional framework. The agrarian reform issue cannot be analyzed without questioning the basic structural characteristics of the economy. It forces a dynamic treatment of the economic framework as an object subject to change. One of the contentions of this thesis is that the agrarian reform problem can be brought within the scope of economic analysis.

The other one embraces the philosophy that development and reform are intimately related concepts and not different or contradictory. This philosophy of high social inspiration believes that the redistribution of income and productive factors, especially land, has a strategic role to play in the acceleration of economic development in the less developed nations with particular reference to Latin America. The relationship between a better distribution of income and economic development is important in our context because if we consider development as a means to erradicate poverty (underdevelopment), increments in per capita income cannot be entirely satisfactory unless this larger income is better distributed among different sectors and factors of production, among different geographic regions and among distinct groups of society.

The realization of equal economic opportunities for all is a necessary condition to promote and sustain economic progress and fulfill the ideals of social democracy. In predominantly agricultural societies where the dimensions of economic opportunity, the basis of wealth and the status of people is largely determined by the land tenure system, agrarian reform has a very important role to play.

The terms land tenure and agrarian reform have many interpretations. Therefore, the ways in which they are used in this thesis must be examined. Land tenure refers to social institutions whose purpose is the regulation of contractual relations between individual groups, associations and estates about the right and duties which accompany given types of ownership, usefruct as usages of land, and the forms in which property rights and rights to use are acquired and disposed of. Other arrangements, for example, squatters, sharecroppers, etc., while they regulate rights to use land, viewed from the other side also regulate and fix norms about the giving and use of labor.

Land tenure is also used to refer to the distribution of rights to land according to the extension and value of the land. In this sense, where land is a scarce resource or is unevenly distributed, the amount of land controlled is the most important determinant of wealth. The differential distribution of those rights according to castes, estates, and classes must be expected to be a major force in the formation of a system of relations between these social segments or in other words a main determinant of the social structure.[2]

Agrarian reform refers to the full range of processes intented upon improving or changing the existing systems of land tenure. Reforms are derived from social unheaval to organized action by the State. The term includes the following types of reform:

a) Transfer of land ownership to tenant cultivators.

b) Regulation of rental rates and practices and the enactment of lease protection laws.

c) Consolidation into efficient-sized units of strip parcels and scattered holdings.

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[2]Andrew C. Pearse brings this out with great clarity in his article, "Land Tenure, Social Structure and Development in Latin America", America Latina, Ano 6, (Julio-Septiembre, 1963), 77-84.

d) Subdivision of large landholdings.

e) Transformation of large estates into workers cooperatives.

f) Large landholding operated by a public authority or private company in which profits are shared by the agricultural workers (Puerto Rico).

g) Land nationalization and distribution of it on small landholdings or co-operatives.

h) Creation of joint-collective and state farms.

i) Communal systems, eg., the Ejido in Mexico.

j) Transfer of large holdings abandoned by the former colonial powers to landless peasents (Algeria).

The full effect and success of agrarian reforms however, can only be obtained if they are accompanied by a series of complementary measures such as:

1) The development of an efficient extension service.

2) Better marketing and storage facilities.

3) Agricultural credit.

4) The supply of agricultural inputs.

5) The establishment of co-operatives.

6) Education.

7) Community development programs.

When agrarian reform is formulated within thia structure, it is known, as an "integral agrarian reform". Yet these measures by themselves cannot constitute agrarian reform because they can be carried out without modifying land tenure relations. Only when tenure relations have been altered can auch related measures be considered a part of agrarian reform.

The desperate attempt to "freeze" reform, especially in Latin America, haa led to the formulation of every imaginable substitute for it. Among

these are: land settlement programs, land taxation, literacy campaigns, army civic action programs, etc. Although these administrative and technical measures are necessary sometimes to initiate or complement agrarian reforms they cannot be offered to the peasents as an alternative to real fundamental reforms. In the words of a prominent Mexican economist:

> In fact, the critical question facing most Latin American nations is whether their governments carrying out technical and administrative improvements, but abstaining from fundamental economic and social reforms, will be able to halt inflationary pressures and balance of trade deficits and, somehow, manage to produce enough food for their growing populations. If they fail, the outcome would be either economic stagnation with increasing military repression or revolution.[3]

The objectives of an agrarian reform program in the context of Latin American conditions and in particular that of the Republic of Honduras, which is the main concern of this thesis, stems from the inadequacy of tenure institutions. The most striking feature of these tenure relations is the great concentration of ownership in relatively few large units, and the vast number of very small units at the other end of the scale. While it is difficult to generalize for so large and varied a region, the most common agrarian structures are: (1) the importance of latifundios, or very large farms with its two main variants: the hacienda type of extensively cultivated estates and the intensively worked plantations. Both systems embody land monopoly elements, both result in extreme maldistribution of income and social conditions which are often described as deplorable, and in the consolidation of power resulting from land concentration, (2) the large number of minifundios, or very small farms that at present levels of technology, cannot give the farm family an acceptable minimum level of living. The situation is aggrava-

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[3]Edmundo Flores, "The Economics of Land Reform", International Labour Review, LXXII (July, 1965), 27.

ted by the increased fragmentation, by illegal occupancy (squatting) and by shifting cultivation, (3) the special situation of the comunidades or communal holdings, whose origin goes back to the Incas, Mayas and Aztecs of the Andean Region in South America, Central America and Mexico, (4) the peculiar form of farm labor known as the colono system, in which the worker is paid in the temporary or traditional usufruct of a parcel of land and in return he must serve a specified number of days on the estate as well as members of his family, and (5) fiscal land with or without occupancy by farmers.

In a system, as the one just described above, vertical social mobility is impaired, people are separated in rigid cultural-social classes and it confers power upon those with inherited position and wealth. That such system is an obstacle to development, was admirably described by a FAO expert:

> Farm investment is low, demand for consumer goods is restricted, and large segments of the population are held at the margin of the economic stream in the countries. Political democracy and social mobility are greatly circumscribed... If one were to superimpose the effects of the other institutional factors-which in addition to what may be called "access to land" include access to capital and access to markets, the tax structure, education, local government and other related aspects--the situation would appear even darker.[4]

Historically, the pressure for agrarian reforms has been motivated mainly by social and political considerations. Nowadays, more emphasis has been placed on the economic aspects of agrarian reform. In fact, all three objectives are implicit in the formulation of agrarian reform programs around the world. These objectives can be summarize as follows:

1) Economic: a more equal distribution of income and greater agricultural output and productivity.

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[4] Thomas F. Carroll, "The Land Reform Issue in Latin America", Latin American Issues, ed. Albert O. Hirschman (New York: Twentieth Century Fund, 1961), 170.

2) Social: Improvement in the levels of living and ample social equality and opportunity.

3) Political: Redistribution of political power and greater participation and representation for all individuals.

The planning of agrarian reform programs requires to examine whether, and to what extent, reform measures demand additional capital for compensation purposes or new personnel qualifications and forms of organization to administer the new projects; the speed with which the reform is to take place, etc.

Every agrarian reform program has to be highly individualized and adjusted closely to the conditions and needs in the individual countries; though this, of course, doea not exclude the fact that the same general principles of a reform program may be successfully applied in several countries or that particular experiences in one country may be of considerable value for other countries. But the success of an agrarian reform is to a large measure dependent upon the degree it can be made to harmonize with the cultural matrix and to adapt exiating social and economic institutions to promote progress toward fulfilling the necessary conditions of economic development.

The above paragraphs have described in a very general way some of the main features of land tenure systems and the measures designed to change them. It is not fruitful to discuss land tenure simultaneously from every angle. Much of the confusion in this field comes from the tendency to ask general questions, such as: Is this or that particular system of land tenure better for society? Are family farms desirable? Is collective farming a failure? It aeems much more significant, though by no means easy, to look at land tenure institutiona from specific points of view, such as their role as facilitators or hindrances to technology, output, capital formation, how do they satisfy social needs, etc.

This thesis will attempt to study the contributions of agrarian reform to agricultural development and to a certain extent to general economic development. In particular it intends to show how the systems of land tenure hamper development and the means to correct them, in a small Central American Republic, Honduras.

CHAPTER II

THE FRAMEWORK OF AGRICULTURAL DEVELOPMENT[5]

The Contributions of Agriculture to Economic Development.

In the earlier discussions of economic development priorities, great emphasis has been placed on rapid industrialization. However, the experience of many less developed countries has shown the limitations of over-emphasizing industrial development to promote economic development, and there appears to be now a general recognition that agricultural progress is also a strategic element in the development process. The false dichtonomy of agricultural vs. industrial development as alternative development policies is no longer accepted, and increasing attention is being paid to agriculture as a complementary and supporting measure to industrialization as well as an important contributer to general economic development.

Before analyzing the ways in which agriculture advances over-all economic growth, it is important that the concepts of economic and agricultural development be defined as they are used in the context of this thesis. By economic development, it is understood, cumulative and self-sustained increases in real per capita income over time resulting from institutional, technical, economic and sociocultural changes. This broad definition implies among other things, technological change, greater efficiency in economic re-

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[5]Background material for this chapter; B. F. Johnston and J. W. Mellor, "The Role of Agriculture in Economic Development", American Economic Review, LI (September, 1961), 566-593; W. A. Lewis, "Economic Development with Unlimited Supplies of Labour", The Economics of Underdevelopment, ed. A. N. Agar Wala and S. P. Singh (New York: Oxford University Press, 1963), 400-449; Inter-American Development Bank, Agricultural Development in Latin America: The Next Decade. Washington D.C.: Inter-American Development Bank, pp.147-168; Montague Yudelma, "Agricultural Development In Latin America: Current Status and Prospects", Inter-American Development Bank. (October, 1966), 69-73; Carlos M. Castillo, "El Desarrollo de los Recursos Agricolas de Centro America", Trimestre Economico, XXIII, (Enero-Marzo, 1956), 73-89; Enrique Irazoque Barrenechea, "Hacia un Enfoque Integral de la Reforma Agraria", Trimestre Economico, XXXI, (Octubre-Diciembre, 1964), 600-604.

sources use, ample distribution of the command of productive resources (land, capital, etc), industrial structural change, better income distribution, improved social relations, etc. A mere increase in per capita income forced upon the economy from without, eg., better export prices for primary commodities, although they create favorable financial conditions for economic development, it is not considered development per se unless accompanied by the changes described above.

Agricultural development refers to the process of making an efficient use of agricultural resources with special reference to increasing agricultural output and productivity and improving the level of living of the rural population along with a more equal distribution of income and resources. Agricultural development must be looked upon as depending on a series of institutional, technical and socio-economic factors.

The most important ways in which agricultural development can contribute to general economic development can be summarized in four propositions: (1) provisions of increased supplies of food and raw materials for industry, (2) transfer of man power to the nonagricultural sectors, (3) a potential market for industrial products, (4) contribution to capital formation to the other sectors of the economy, eg., enlarged agricultural export and rural savings.

The growth of demand for food is of major economic significance in developing countries for several reasons. First, high rates of population growth characterize most of the world's underdeveloped countries in particular Latin America. Second, the income elasticity of demand for food is higher in these countries than in the more advanced ones. Hence, a given rate of increase in per capita income or a substantial redistribution of in-

come, has a stronger impact on food demand in developing than in the industrialized centers. Third, many developing countries (Latin America) are witnessing an urban explosion as a result of high rates of migration from rural areas to urban centers, and population growth whose outcome is a growth of demand for marketed supplies of agricultural products.

On the other hand, many countries are entering their earliest phase of industrialization or have already passed it and need continous supplies of r raw materials for the nascent or established industries, which, in most instances, are directly connected with the agricultural sector.[6] This is vital for maintaining a steady process of industrialization.

If food supplies and domesticly supplied raw materials fail to keep pace with growing demand, the result is likely to be a substantial rise in food prices leading to political and social unrest (pressure for wage increases) and shortage of important raw materials with consequent adverse effects on industrial profits, investment, productive capacity, balance of payment difficulties and, in general, to over-all economic growth.

Another problem closely related with making available to the people larger quantities of food, is that of improving the nutritional levels of the population. A shift from starchy staple foods--cereals and root crops--to--high protein food is essential to maintain a healthy, well fed and energetic labor force capable of being more productive.

The agricultural sector is the largest employer in the overall economy of developing countries. Typically, from 40 to 80 percent of the labor force is engaged in agricultural production and a great percentage of the

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[6] In the agricultural sector, besides farming, livestock, forestry and fisheries are included.

people live in rural areas. In densely populated areas, provided that there is a perfectly elastic supply of labor, as in the two-sector model of W. A. Lewis, it is possible to draw from agriculture the manpower needed in manufacturing and other expanding sectors of the economy.[7] On the other hand, in sparsely populated countries like in some Latin American and African countries, where there is a good potential to expand rural employment, it may be difficult to obtain labor for the nonagricultural sectors. Furthermore, the transfer of manpower to other sectors of the economy is determinded by the demand for labour in those sectors which in turn is limited by the rate of capital accumulation, and by the "weight" of the nonagricultural sector in t the economy.

Latin America illustrates a case in which the non-rural sectors have not been able to generate enough demand for the migrating agricultural workers. This rural exodus frequently amounts to a mere transfer of unemployment to the cities with its consequent adverse effects. Agriculture can contribute to check this "premature" rural exodus by expanding output of cash crop and general rural employment. In any event, the bulk of the labor force needed by the other sectors in the economy would have to be drawn eventually from agriculture since there is no other source.

The above paragraphs point out the implications of the transfer of agricultural manpower for industrial development and they offer important suggestions for a sound agricultural policy. So long as countries are in distinct stages of economic growth and have different combinations of resources, different criteria are applicable to allocation decisions.

The large rural population of developing countries represent a poten-

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[7] W. A. Lewis, op. cit.

tial market for industrial products. The prevailing low rural incomes, nevertheless, have restricted the present size of the market and consequently slowed down the output of agricultural inputs and consumer goods. To a great extent, the failure in many countries of import-substitution policies designed to promote industrialization and relieve the external sector of primary producing countries from deteriorating terms of trade, can be found in the smallness of the domestic market. The success of regional integration programs of less developed nations[8] to stimulate industrial development and growth depend, among other things, on the enlargement of their own internal markets which cannot be accomplished unless the purchasing power of their rural population is increased.

Investment decisions are influenced not only by the availability of capital but also by demand conditions and estimates of the future profitability of new investments. In this regard, the size of the market is particularly pertinent in industries characterized by economies of scale so that a high volume of demand is needed to justify the building of a factory. As long as rural purchasing power is low the possibilities of rapid industrialization is very much constrained.

It is also possible that within the framework of an enlarged domestic market the potential benefits of a policy of a balanced and an unbalanced growth can be more easily realized. These benefits, external economies resulting from a parallel expansion in consumer good industries in a balanced growth economy and technological changes inherent in concentrated growth, can have a greater impact if enhanced national markets are fused into the regional market.

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[8] Central American Common Market, established in 1960, the Latin American Free Trade Association (1961), and the East African Free Trade Area.

Trade patterns of underdeveloped countries with the rest of the world reveal the importance of the agricultural sector as the principal source of foreign exchange earner. The expansion of agricultural exports is likely to be one of the most promising means of obtaining foreign exchange earnings to pay for the import of capital goods for industrial development and a shortage of foreign exchange might well retard economic development.

Despite the dim prospects for some export commodities and the efforts to hasten structural change in the economies of developing nations, agricultural exports, where they have a relative comparative advantage to the rest of the world, would continue for a long time to provide the greater part of foreign exchange earnings. This does not mean, however, that these countries should depend in one or two export crops, but that the realization of the importance of agricultural exports to capital formation in their economies, induce them to adopt, if possible, export diversification policies that would lessen the vulnerability of their economies resulting from an extreme dependence on traditional export commodities which have limited possibilities of expansion.

Perhaps the greatest challange to the developing nations of today, that are making efforts to achieve economic progress, are the formidable requirements of capital to finance social and economic development.

The size of the agricultural sector in some of their economies, as the major industry of any consequence, discloses its importance as a source of capital formation for over-all economic development. Such importance is particularly relevant in the earlier phases of development as long as the non-agricultural sector remains a small segment of the economy.

Since it is possible, to raise productivity in agriculture by means

requiring only moderate capital outlays, it is possible that the agricultural sector can contribute to the capital demands of the expanding nonagricultural sectors. An increase in agricultural productivity implies different combination of resources (reduction in some inputs), reduced agricultural prices and increased farm income. Thus, there are tremendous possibilities for transferring capital from agriculture to other sectors, however, such transfer is by no means certain and it is hampered by institutional, social and political problems.

The foregoing paragraphs discussed the possible contributions of agriculture to economic development. Yet, the aforementioned contributions can be realized only if agricultural development takes place. An important point in understanding the problems connected with agricultural development is that the requisities for such development must be considered in their totality and not in an isolated context. In other words, agricultural development ought to be viewed as a series of interdependent and complementary links that go beyond simplistic and static "development" models and involve more than the often invoked ready answer to rural problems, based on the past experience of other countries.

The Conditions of Agricultural Development.

Since agricultural development depends on a series of institutional, technical and socio-economic factors, we can identify some necessary conditions for agricultural development in countries at the level of development as those in Latin America. Some of the necessary conditions may not be sufficient and necessary conditions for all situations, the former one depending on the particular circumstances of a given area. These necessary conditions and the possible contributions of agriculture to economic development provide the conceptual framework for agricultural development.

These conditions are:

1) Knowledge. As far as agriculture is concerned, an investment in increasing knowledge, applicable to agricultural development and specific natural conditions, is the basis of technological change and can be considered a fundamental form of capital formation. Knowledge applicable to agriculture is derived from two major sources: surveys and research for development. Surveys are important for learning more about the country's resources. Research for development is a major element in promoting technological change and the never ending process of raising agricultural productivity and incomes.

2) Spread of Knowledge. A major requirement for agricultural development is that knowledge be transmitted to producers, and that they be instructed in the technological changes that are feasible, and profitable, given local conditions. Producers must be persuaded to adopt and make these changes.

It must be emphasized that the acquisition and spread of knowledge through formal education at different levels, research for development, and education through extension services, co-operatives, collective farms and community development programs are one of the foundations of agricultural development. The total or partial absence of one of these essential ingredients can seriously jeopardize a sustained and cumulative growth in agriculture.

3) Provision of Agricultural Inputs. The development of new techniques and the spread of knowledge about them would have limited results if the beneficiaries (farmers) have no access to the inputs that are necessary for the applications of these techniques. These supplies include such forms of working capital as seeds, fertilizers, machinery and others inputs.

The experience of the advanced countries has shown that of all the factors of production used in agriculture, capital is the one that has undergone the largest increments. The increased agricultural productivity demanded by economic development cannot be accomplished unless there are corresponding increases in the quantities of capital used. There is no contraversy in this regard but rather in the specific forms in which such changes would come about. The most effective approach is the one which emphasizes the increase in the productivity of the resources already committed to agriculture through the use of capital as a complement rather than, as a substitute for other factors of production, especially labor. In addition, the forms of capital as those described above, in many instances, minimize requirements for scarce resources of high opportunity cost, needed in other sectors of the economy.

4) Credit. When inputs are available, farmers should have the means to acquire them. The shortage of credit is undoubtedly one of the factors inhibiting the adoption of new techniques and, in a more general sense, the transition from a subsistence to a market oriented agriculture.

The problem of agricultural credit does not lie only in the quantities available to farmers but upon the conditions on which it is granted. Here it is appropriate to stress the equal importance of short-term; intermediate and long term credit for crop financing, credit for purchasing equipment or credit to finance fixed investment. All are necessary in agricultural development. The excessive requirements of collateral and detail supervision of credit should be minimized especially for small and medium-size producers. Furthermore, the farmer's consumption needs should not constitute an obstacle to the granting of agricultural credit. New institutions must be created to complement the activities of public and private institutions, mainly co-coperatives.

5) Infraestructure. The required infraestructure varies from place to place, but as a rule, on-farm improvements of any sort are of little benefit unless they are supported by off-farm investment. The building of irrigation or drainage facilities, the construction of access roads to farm and markets as well as storage and processing facilities are necessary in order to arrive at a more rapid rate of agricultural development.

6) Institutional Changes and Incentives. Unfavorable institutional factors may stifle the incentives for change even though other conditions for large increases in output do exist. Frequently, then, institutional changes are likely to be the most essential requirement for agricultural development to proceed whenever the deficiencies are critical limiting factors. The term embraces a number of considerations including land tenure structures, systems of marketing, taxation, legislation and the orientation of governmental institutions.

There is little possibility for achieving substantial change in a short time unless the agrarian structure is reformed in such a way as to provide the majority of the rural population, eg., the peasents, with a direct and substantial interest in supporting national development targets and a real reward for achieving them. Increased returns and incentives to introduce technological change can be hampered if the benefits of marketed products that producers should receive are notably reduced due to poorly organized markets. Taxes on production or duties on imported agricultural inputs often distort cost-price relationships and are major impediments to an increase in output. Similary, export taxes or differential exchange rates for exports can make prices unattractive to producers as an incentive to increase output. Incentives, then, can be created or not, depending not only on pecuniary motives, but also on institutional motives as well.

As a result of the orientation given to agrarian policies, especially in Latin America, institutions serving agriculture (credit agencies, national ministries of agriculture, etc.) have been inclined to serve privileged minorities. A shift is necessary to convert these institutions as instruments for promoting changes or for really modernizing agriculture. Duplication of functions, budgetary restrictions, lack of coordination, badly orientated activities (extension services, credit, marketing policy, benefit only few producers), are among the many factors that have prevented this type of institutions to play an important role in the acceleration of agricultural development in many countries.

7) Social conditions. The levels of living of the rural population can be greatly enhanced, if, in addition to technical, economic and institutional changes, a variety of services are provided that directly contribute to the level of rural well-being-improvement in housing, advice in home economics or family planning, building of schools, clinics or citizens' hall, or all these things as a part of community development programs.

The fulfillment of the necessary conditions for agricultural development and the potential contributions that agriculture can make to it requires a major effort by the countries involved. In relation to Latin America, with its great social and economic differences, the propositions exposed above can not be accomplished unless agrarian structures and other institutions are changed. True, some progress may be achieved in regard to production, but rural conditions existing in the rural media will not change to any noticeable extent. If the present bases of land tenure relations are not altered it will not be possible to achieve a transformation of agriculture can thereby a sustained agricultural development.

CHAPTER III

AGRARIAN REFORM AND TECHNOLOGICAL CHANGE

It is generally agreed that the productivity of land and labor in many parts of the world is generally low. Responsible for this state of affairs, is the lack of better farm methods of production. There is, however, a potential scope for large improvements in agricultural productivity provided that favorable conditions exist for the introduction of new technologies.

This chapter will consider some of the ways in which land tenure structures can inhibit the technological innovations necessary for improved productivity, and the stimulus which can be given to technological change by appropriate agrarian reforms. It is worthwhile to mention that institutional arragements though important in creating favorable conditions for technological change, are only one of the many factors influencing that transformation in agriculture.

Types of Improvements.

As a preamble to this discussion it is useful to classify briefly the types of technological innovations that are available to farmers. Clearly not all technological innovations are circumscribed by land tenure relations and for this reason it would be helpful to establish the terminology for distinguishing between different types of innovations.

Technological developments may be labor-intensive or capital-intensive. Examples of the former are the double transplanting of rice. Capital-intensive techniques may have a direct effect in increasing yields per hectare as when a tractor makes possible deeper ploughing or when better storage facilities avoid wastage of products. But generally they are intended to increase

output per occupied man rather than output per area sown as it is the case in labor-intensive techniques.

Technological innovations may be either expensive or cheap in money terms, relative to the farmer's resources. For example, a tractor is cheaper for farmers in rich countries (its price bears a lower ratio to his annual income) than in poorer countries. On the other hand, manual work at harvest time is more expensive in the former countries than in the latter ones.

Technological improvements can be lumpy or divisible. A tractor, a mechanical sprayer or major irrigation works are typically lumpy because they can be used profitably over large areas. Fertilizer use, improved seeds, pump-irrigation are examples of divisible innovations.

Technological developments can be more or less innovative, that is, require a greater or lesser departure from imbued traditional habits. Thus, there is a bigger jump from the wood plough to a tractor than from a reaper-and-binder to a combine-harvester.

Technological changes may be more or less risky. Results of more irrigation can be more convincing to farmers that have traditionally used it than to farmers not accustomed to it.

Technological transformation may be either individual or necessarily communal. There are techniques that can be introduced by farmers individually without reference to his fellow agriculturists. Others like, major irrigation works, pesticide measures, adoption of fixed rotation or land consolidation schemes, that, to be feasible, effective or possible to be carried out, require co-operation among farmers.

Introduction of new techniques can be either long-term (drainage system) or quickly exhausted, like dressing of nitrogen fertilizer.

Finally, technological improvements can be movable or fixed. Tractors are a good example of the former and major irrigation works of the latter.[9]

In developed countries, especially those with a large and growing average size holdings and progressively declining rural populations, the kind of technological innovations sought are those that increase labor productivity, that is, capital-intensifying, expensive, lumpy, individual and less risky and innovative.

On the other hand, in developing countries the choice is quite different. The possibilities of technological improvement very often lie in those that are output increasing, cheap, divisible, risky, innovative, quickly exhaustive and sometimes communal. It is possible to obtain great gains from what is already known and could be known after a few years of experimentation under local conditions.

There is not a defined sequence, however, for the adoption of agricultural techniques in the course of agricultural development. It varies according to the environment. Nevertheless, it is possible to suggest a sequence that starts with the introduction of capital-cheap improvements (use of improved varieties, use of manure, planting at regular intervals) that yield higher income which permit techniques requiring an expansion of working capital (use of chemicals-fertilizers, pesticides, etc) and then, the further increase in income leading to possible savings (individual or institutional) which make possible the larger longer-term investment, eg., Japan.

The diffusion of knowledge depends both on being put within the reach of farmers (research, extension, etc) and their willingness to adopt and

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[9]Comprehensive analysis of the subject in; United Nations, Social and Economic Council, Progress in Land Reform. (F.A.O.-OIT, 1966) (New York, 1967), pp. 118-120.

apply it. Land tenure institutions can affect both but especially the latter.

Tenure Systems and Technological Progress.

In societies where tenancy and several of its derived forms predominate or do exist, the need for reform can be exposed in terms of the negative effects which these tenure relations entail. They may be discussed under four headings: insecurity, crop-sharing, poverty and lack of independence.

Insecurity.- Insecurity of tenure is often a deterrent for the farmers to make long-term investments in immovable equipment and land improvement, such as conservation measures, and irrigation. Insecurity of tenure makes it also difficult for the peasent to introduce rational rotation systems since he never knows if he will complete the rotation cycle.

A recent study shows that this is the case even in the United States where the position of the tenant is stronger than in most developing countries. An analysis of the value of investment in the state of Kansas between 1953 and 1957 on a group of owner-operated farms, a group of crop-share-cash tenancies and a group of livestock share tenancies showed a consistent pattern whatever type of investment in long term farm improvement was considered. The livestock-share tenant farms received less investment than the owner operated farms and the crop sharing farms received even less.[10]

The insecurity of tenure precludes even the minimal of innovation, if farmers lack either title or lease to the land they cultivate. This is particularly true in Latin America where a large proportion of the land is held by occupants without any title to the land, tenants without a written lease

[10] Paul W. Barkley and W. H. Pine, Effects of Tenure on Farm Improvements, (May, 1963). Kansas Agricultural Experiment Station, Bulletin 454, Kansas State University (Manhattan, May 1963).

or laborers that work in large land holdings.

As explained before, investment in long-term improvements, except for irrigation, is a less important technological innovation in developing countries, hut insecurity of tenure has considerahle impact on the choice of crops, especially permanent crops for export or livestock farms, and on the cultivator's willingness to introduce small irrigation works and simple conservation measures.

Crop-sharing.- The ahsence of adequate compensation arrangements for temporary improvements is detrimental where a tenant, crop-sharing lahorer, of squatter in addition to the division of the crop, he also has to divide the benefits from any improvement temporary or permanent. It is essential also that share-tenants of any kind, possess the right to claim compensation for the unexhausted part of the improvement at the termination of the lease or when ejected from the land. In any case whatever the arrangements, the tenant is likely to ahstain from using additional fertilizer, hetter seeds and improved agricultural methods unless his share in the henefits derived from his lahor-intensive improvements cover his additional costs. If the landlord provides all of the purchased inputs and he is traditionally bounded, he may he unwilling to supply new imputs that involve some risks.

In many underdeveloped areas in South East Asia and Central and South America, landless workers and squatters frequently do the pioneer work of cleaning unused private lands, but constantly fear the threat of ejection. By giving them some protection and incentive to conserve the land they can introduce some technological improvements and agricultural output can he expected to increase considerahly.

Poverty.- The low productivity of the factors entering the production process and the scarcity of land in many parts of the world result in poverty

to a great majority of tenants. The outc me of low productivity levels, is usually very low income from which the tenant is not able to save enough to afford any improvements which require cash outlay. Even the kind of cheap technological improvements mentioned above are hard to introduce when the tenant does not have any security to the land, credit is difficult to get and interest rates are excessively high. They are even higher for tenants that cannot offer any collateral and who probably have already an outstanding debt contracted simply to keep their families alive in times of crop failures. In this situation of poverty and insecurity no one can expect the tenant to borrow to introduce any improvements in the land unless he is certain about the possible benefits.

Laziness, an argument very often used by those who oppose measures to improve the peasents' lot, can easily be refuted in terms of the miserable conditions in which they live. For the tenant who does not eat enough, who is subject to disease, or is weak in mind and body, even a technological innovation which is cheap but requires more physical effort and risk seems too costly for the tenant or peasent unless he is assured of its feasibility and profitability.

Where the land-man ratio is low, rents are not usually determined by the fertility of the soil, but by the fertility of human beings (land is a scarce resource) and it will command a high price. This situation, coupled with a high degree of land concentration, results in land prices which are still higher. If the tenants are at the edge of subsistence and have to pay high rents the possibilities of technological change are seriously impaired.

Even when some major technological innovation is introduced, the situation does not change if the benefits of the innovation are monopolized by

landlords. In parts of the Sudan (Africa), land productivity has been greatly raised by the development of irrigation-usually by individual entrepreneurs who get pump licences. The result, noted by an observer, is that, "the greater part of the revenue...does not go back into the land for improving production and raising productivity because most licencess are absentee water-lords who usually spend their share of the crop proceeds in building constructions and other non-productive activities in urban areas. With the surplus thus monopolized by the water-lords, the cultivator remained too poor to risk the expense of innovation".[11]

Lack of independence.- In traditional societies the tenant is rarely an independent entrepreneur. The landlords even if they only provide the land, interfere with the tenants management of the land. To illustrate the point, it is not uncommon for the landlord to compel the tenant to cultivate a certain crop even though the possibilities exist for the introduction of a higher-yielding crop. Or he might force him to pay the rent in certain staple crops, etc. Indeed such actions can prevent the development of innovations.

The above are some of the ways in which tenancy can prevent technological change. They were exposed on the assumption that the tenant is an "economic man" and as such acts rationally for his material benefit. But the situation is worse in land tenure systems in which the social structure created by them, prevent the peasent from behaving economically. This is the case in the minifundia-latifundia systems of Latin America.

The characteristics of land tenure systems, as those prevailing in Latin America, are inimical to technological change. Excessively large land

[11] Progress in Land Reform, op. cit., p. 123

holdings do not encourage and very large number of small holdings do not permit technological change.

The rigidity created by such land tenure systems, is not conducive to changes necessary to meet demographic growth, new developments in agriculture and the general economy and in techniques and knowledge. The capacity of land tenure systems to adapt themselves to new technological and economic requirement is essential for agricultural progress.

Large land holdings. As described before the large land holdings generally cultivated very extensively the land, the combination of resources is usually inefficient, the land is rarely improved, with notably some exceptions etc. The Argentine situation illustrates the low productivity of big holdings. Large-scale hired-labor farms in the pampa have some 56 percent of the farm land but produce only 44 percent of the value added in the agricultural sector. On family-scale farms, each permanent number of the labor force works an average of fifty-seven hectares of which 60 percent is in cultivation. The very large-scale units have 300 hectares per worker with 38 percent cultivated. The possibility that the smaller farms having the advantage of greater soil fertility is discounted-not least by the existence of a few large-scale farms which are efficiently managed and highly productive.[12]

In Algeria the precolonial government built a dam capable of irrigating 120,000 hectares, but after 15 years only 40 percent of the water was used. The existence of big land holdings was chiefly responsible for the poor use of water since they were interested only in irrigating a small fraction of their farms.[13]

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[12] Ibid.

[13] Ibid. p. 124

The main incentive to innovation are prospective profits. The big land owner usually holds land for speculative purposes, social prestige, protection against inflation and not mainly for productive activities in agriculture. Thus, many of the large estates remain, with rare exceptions, without the introduction of new techniques since the large farm size provides imminently satisfactory incomes to their owners; their management being based on cheap labor and extensive cultivation.

Small holdings. Other things being equal, the smaller the farm size the greater is the incentive to increase output per unit area. Yet, all things are not always equal, especially in regions where tiny plots predominate, producing insufficient income for the people who operate them and whose poverty in general, is overpowering.

Under these conditions, even when the goal of progress is desired, the great reluctance of changing traditional farming methods, indicating a high risk aversion, provides an effective obstacle to the implementation of technical innovations. From the standpoint of the individual farmer it is perfectly rational to avoid methods of farm management that disrupt the quasi-stable equilibrium that the levels of subsistence provide. At this level, the kind of technology most suitable to their conditions, cheap, risky, innovative, quickly exhaustive and labor intensifying production methods, can lead to starvation because the marginal utility of a unit of value lost is substantially higher that of one gained at subsistence.[14]

The argument is perhaps more relevant if improvements are lumpy or fixed in character. Here, apart from poverty considerations, the smallness

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[14]Erik Thorbecke, "Agrarian Reforms as a Conditioning Influence in Economic Growth", Agrarian Reform and Economic Growth in Developing Countries, ed. Farm Economic Division (Washington, DC. USDA, 1962), 9-10.

of the holding is not conducive to technological progress because the chances are that as the farmer seeks to maximize output per unit area, the marginal return to his labor diminishes progressively, as the area of the farm becomes smaller (costs tend to increase since the farm cannot fully utilize lumpy innovations).

It is clear, then, that the main casual connexion between too small holdings and reluctance to invest in innovations, is the simple one that the farms of the small holdings are too poor. That is why it is not only lumpy innovations which are inhibited but any which require cash investment, however, divisible they might be.

In addition there are some indirect effects of large-small tenure systems. Firstly, development services, eg., extension, credit, research, are monopolized by landlords and in very few instances do they reach the minifundio cultivators who need them badly. Secondly, the bifurcated social structure created by these systems in rural areas (Latin America) may prevent the kind of cooperation between farmers necessary for technical innovations which are lumpy and necessary communal (irrigation) or co-operative measures to control crop desease, the cooperative organization of processing plants or marketing organizations. The reasons being the glaring inequalities and mutual suspicion and resentment between them.

A third way in which development is inhibited in these societies, is by the influence of landlords over the disposal of national income and more narrowly government expenditures. In agrarian societies, where the surplus from agriculture constitutes the main source of capital for economic development, investment in technically progressive enterprises is thwarted, if those who have surplus (savings) dissipate it in luxury consumption, or invest it in urban real estate or in industry or commerce, which is benefitial, if the flow

of funds comes from rising agricultural output sustained by enough investment to maintain a continued rise and not to buy more land to be cultivated by the same farm methods.

Government revenues are not likely to be spend on such development services which are essential for the diffusion of technological improvement (research, extension and education), if it does not have to rely for its support on the mass of producing farmers but on consumption-orientated landlords usually not interested in production activities in agriculture.

Fourthly, this land tenure structure affects the society's value system as to inhibit technical progress in at least two ways. Prestige is attached to land ownership as such, not to efficient or profitable farm management and perhaps even worse, the power which land ownership give over other men. In other words, the ways toward a better life is not to work, save, invest and produce more by one own's effort, but to have access to the work of others.

Finally, in these societies individual desires are so shaped that the initiatives to take new departures (innovations), to seek to better themselves, or try to change their own situation and environment, are severally limited. Unless people can envisage the possibility of betterment and the sense of having within one's reach the power to change one's environment and mould it according to one's desires and ends, technological change comes very slowly. All those effects are a by-product of the social structure of a given society which in turn is caused, to a great extent, by the instituions of land tenure. A change is necessary, if agricultural development is to take place.

Types of Reform and Technological Progress.

Agrarian reform measures are favorable to agricultural development if

they realese the productive energies of the people and prepare the ground for the application of new agricultural techniques leading to increases in agricultural output and the real income of the cultivator. The most effective agrarian reforms are those that will give the maximum incentives to introduce any type of technological innovations.

Since agrarian reforms in general correspond to very specific features of land tenure relations, their applicability, in principle, is easily determined. For tenancy systems as those described above, there are two possible remedies: the milder one of statutory regulation of tenancy, and the more drastic one of land redistribution. For the latifundia-minifundia system in addition to the more drastic one of redistribution is the milder solution of establishing co-operatives for small farmers. Note that these proposals are intended to establish some type of family-owned and operated farms.

Tenancy Reform. Nearly all the restrain to technological progress brought about by inadequate tenancy relations can be removed or mitigated by effective tenure legislation reform. Strict provisi·ns against eviction of tenants, legislation stipulating minium terms of lease, provisions concerning compensation for unexhausted improvements and recognition of squatters rights can lessen the ill-effects of insecurity of tenure. Rent control at low levels and credit on better terms as well as some technical assistance, can alleviate the poverty of the tenant and leave him leeway for investment. Laws abolishing crop-sharing and forbidding contracts that interfere with the managerial independence of tenant also can be passed. Written leases must be compulsory too.

Such measures have been very successful in countries like Japan, Argentina, United States and some European countries. The main objections to

such solutions is that they are hard to enforce especially in developing countries.[15] Furthermore, they may even be difficult to pass if, it will affect numerous groups of small and medium landowners with well organized influence and often strong political representation. Neither they would be effective in systems characterized by the prevalence of insecurity of tenancy and high concentration of land (Latin America).

Co-operatives. The promotion of co-operatives among minifundia farmers can remove some obstacles to technological improvement in several ways. They can provide the organizational channels through which information about new techniques can reach the farmers as well as unite their efforts in the realization of improvements which are necessarily communal. The co-operatives can facilitate lumpy investments in order to fully and permanently utilize them and obtain an ample distribution of the benefits derived from their usage. Co-operatives can also make available inputs (fertilizers, etc), credit and marketing facilities. However, where holdings are so small that producers are at subsistence levels, it is doubtful that co-operatives can function successfully.

Land Redistribution. If tenants become owner-occupiers, and if minifundia cultivators are alloted farm units large enough to support and utilize fully their family labor, either by sub-division of big under-utilized estates, consolidation measures, or by the settlement on unoccupied land, th then, it is expected that most of the barriers to technological progress disappear.

There are, however, some negative effects that are difficult to erra-

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[15] These problems are analyzed in the case of India by; V.M. Dande ar, "A Review of the Land Reform Studies", sponsored by the Research Programmes Committee of the Planning Comission" (Government of India, 1961); and T.R. Sundarara, "Evaluation of the Effects of Land Reform", Asian Economic Review, IV (August, 1962), 504-22.

dicate, at least in the short-run. It is not possible that a peasant suddenly changes his sense of dependence and risk aversion and develops the initiatives to adopt more productive techniques merely by becoming the owner of the land. In general, what a successful agrarian reform can do, is to create a new self-consciousness--it provides a ready background for education-since it develops the qualities of intellect, common-sense, energy, resourcefulness and prudence all of which are necessary to accept technological changes and make the best use of technological innovations.[16]

The acquisition of land does not of itself inmediately provide the peasants with capital for productive investment. Production can decrease if landlords fail to invest on the land which they retain after expropiation or resume cultivation of land they cannot properly manage etc. There is no doubt that land redistribution schemes do not bring about inmediate technological innovations. Rapid progress can result if some complementary measures are undertaken to back up redistribution measures. Here the concept of "integral agrarian reform" becomes relevant as well as the nature and conditions of agricultural development described in Chapter II. The conditions for that progress can be repeated roughly as:

1) Supplies of technical advice.

2) Supplies of credit.

3) Supplies of necessary investment materials.

4) The provision of agricultural infraestructure.

5) The right attitudes and aptitudes on the part of farmers.

6) The kind of social organization at the village level conducive to co-operation in the effective and fair use of governmental services.

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[16] United Nations, Conference on The Application of Science and Technology for the Benefit of the Less Developed Countries. Agrarian Structures and Land Settlement , (E/Conf. 39/c/305, February 4-20, 1963) (Geneva, 1963), par. 46.

It is essential for agricultural development that at least the first four measures accompany agrarian reform programs. Yet, given the conditions of many developing nations; it is futile to expect that all these ancillary measures always be concomitant to the programs, in full scale and in large quantities.

Even if (1), (2), (3) and (4) are provided, land ownership will not lead to technological development, if farmers have no interest in such development and if the social organization required to make use of governmental development services is absent, eg., effective and internal control over the distribution of supplies and credit. These changes require time. But it is precisely in changing these attitudes--the breaking down of feudal barriers, the increase in economic opportunities and vertical mobility, new attitudes to agriculture, the growth of agricultural education, that the major beneficial results from land redistribution come from.

The scarcity of technical skill and managerial efficiency in developing countries rises the question, which is particularly relevant to technological progress, what is the ideal form of farm enterprise? So far the discussion has been carried out in terms of the creation of an owner-cultivator freehold system. However, there are other ways of redistributing the rights to use the land and distributing freeholds. The most common are the collective or joint farms and the state farms of Eastern Europe, USSR, China (mainland), Algeria and Cuba. The Kibbutzim in Israel is another example. In addition to both systems there are some intermediate ones like the co-operatives of the United Arab Republic, where the state controls the member's cropping patterns and production methods while the individual farmer cultivate his own land and has exclusive right to its produce.

The underlying economic arguments in pro or against either system is of

no concern for the purposes of this paper. But it is worth considering very briefly the economic results of these potential forms of farm enterprises in regard to the advantages or disadvantages of concentration of farm management functions in skilled hands (budgeting of skills) so as to get the maxium yield of over-all technical improvement.

There is no general answer irrespective of local conditions. Value judgements are also involved but the kind of economic factors that may influence the choices are:

1) The size and nature of the educational, cultural, or ethnic gap between the skilled and farmer-whether it is conducive to equalitarian co-operation, rule enforcing, etc.

2) The relative combination in the skilled, of innovative enthusiasm and technical competence. If the former predominate, the extension solution is better; if not perhaps a state farm.

3) The type of improvement possible. If the greatest benefits are derived from either necessarily communal improvements, like irrigation works (co-operation or collective are better suited), or individual innovation like better seeds, then the family farms offer a better solution.

4) Just how much more expert the skilled are than the individual farmers, and whether they have a dogmatic or willing-to-learn empirical approach to their task. If the skilled have a great deal to contribute, the collective or supervised co-operatives constitute a sure mean to diffuse knwoledge among farmers rapidly. If not, the family farm offers a better solution.

5) The advantages of these tenure forms depend on the starting point. If the system before was characterized by large plantations with a lot of capital equipment, a change to state farms or collectives might be a better solution than complete subdivision. Or if a break with the past is wanted so

as to facilitate technological progress and change people's attitude, then, the change from an owner-operated system (without extension services) to a supervized co-operative, may be better than a change to an owner-farmer extension system.[17]

It can be said that often an agrarian reform stimulates and serves as a necessary condition for technological progress in agriculture. In the short-run, agrarian reforms can: (1) allow the peasants to innovate by granting autonomus control over their holdings, (2) modify tenancy relations so that the increased yield by the new innovations can accrue to the farmers who made it, (3) by redistributing land, new techniques can be profitably applied due to improved size of holdings, (4) by improving the peasant economic position, necessary investment in technological innovations is possible.

Agrarian reforms can, through the transformation of the social structure, contribute over the long run, to changes in attitudes toward innovations in aspirations, in entrepreneurship, in acceptance of risks and in the tendency to find out actively about new techniques. Agrarian reform by itself cannot bring about these changes, others social and economic changes are necessary for them to be completed. In other words, it is not a panacea but a substantial step forward to economic progress.

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[17] Progress in Land Reform, pp. 133-134.

CHAPTER IV

AGRARIAN REFORM AND AGRICULTURAL OUTPUT

In the previous chapter, the effect of various kinds of agrarian reforms on the pace of technological innovations in agriculture was considered. By technological innovation was understood, the introduction of new elements to the production process, eg., fertilizers, seeds, etc. The meaning of technological innovation throughout that discussion was synonymous with increases in production or improvements in the productivity of the factors of production, for it is generally believed that substantial improvements in the agricultural sector (output) come about mainly by new agricultural techniques. Without the availability of new methods, such as tools, farmers are rarely able to get better results.

There are, however, circumstances in which the transformation of the agricultural sector come not only by the introduction of new techniques, but through a more efficient combination or utilization of economic resources. Although this can be regarded as technological change, it can happen without the introduction of new elements to the production process.

Since tenure systems form the institutional framework within which land is used, tenure determines the dimensions of opportunity in farming and it is one of the basic factors influencing the efficiency in the use of land, labor-including management-and capital. Land tenure systems are not good or bad, efficient or inefficient in themselves. They can only be judged adequately when compared to possible alternate systems, either already existing or as models which fulfill certain criteria more or less fully. In this case, how efficiently the factors of production are transformed into the farm products the community wants. Thus, a family farm system is not a goal in itself but only so far as it is conducive to efficient farm practices.

In an economy where prices reflect consumer wants and guide the allocation of resources into productive ways, farmers can maximize their returns in a way consistent with the desires of society by: (1) employing techniques of production and combining the factors of production in such a way as to minimize costs, and (2) by extending the total scale of operation in a manner consistent with returns and costs.

If the tenure systems impede or obscure the attainment of these practices, they can be considered inefficient as far as production is concerned. In what way do they affect these postulates of production economics depend on local conditions since in every culture and region tenure institutions and farming are linked up in somewhat different manner.

Apart from social and political desiderata as well as influence of local conditions, it is possible to translate economic principles into workable criteria of a more universal applicability. The factors influencing efficient production can be summarized as follows: (1) economic size and lay out of farms, (2) incentives and opportunities, and (3) favorable conditions for capital formation and productive investment. The problem of incentives was related to technological change in the last chapter. The last one would be discussed in Chapter V, leaving as the central theme of this discussion the problem of the size of units.

Economic Size of Units

By and large within an agricultural region, any system of land tenure operates through a characteristic pattern of farm sizes. Changes in tenure relations are likely to alter this pattern, and, conversely farm sizes cannot approximate optimal conditions without calling for changes in tenure. Thus, a good tenure system should contribute to the establishment and maintenance of working units of land of agriculturally rational size, shape and

layout which is of vital importance for agricultural development.

In many areas of the world where inequalities in land distribution prevail (latifundia-minifundia systems), agrarian reform requires the redistribution of land into different operating units, which often involves changes in production methods and types of farming. From the point of view of farm management efficiency, the very large farms which utilize land very extensively, are wasteful of land, while the minifundio (small holdings) are using labor inefficiently. This situation raises the issue of determining maximum and minimum size standards for redistribution programs.

Under these forms of tenure production can increase by a better resource use. Whenever large estates are broken up into smaller units or underdeveloped lands are reclaimed for new settlement, maxiumum limits are set for the newly created holdings in order to provide opportunities for as many farm families as the land can support. As more land becomes available which was previously inefficiently cultivated and later on adequately improved, and by the establishment of new economic holdings, the total production of the area will be increased.

The land redistribution schemes often establish minimum limits to the farms in order to prevent the proliferation of too many uneconomic units. It is believed by many that the breaking up of large estates does not lead to an increased production or increased efficiency, but to the opposite effect. This argument does have some validity especially if the former land owner has provided the tenant or small producers with capital and management. The extent to which a change in the size of the farm unit affects adversely productive efficiency depends on the nature of the returns to scale.

In conditions of constant return to scale, a change in the size of the farm unit will not improve productive efficiency. This means that a process

of land consolidation and subdivision would not affect total agricultural output. Thus, productive efficiency is unaffected and an improvement in rural income is achieved by the effect of income redistribution. On the other hand, if decreasing returns to scale prevail, productive efficiency is increased, economic growth attained as well as the goal of equality implicit in any agrarian reform program. It is only under conditions of increasing returns to scale that productive efficiency is hampered. It is believed that in developing countries agricultural production is taking place under conditions of constant returns to scale.[18]

Even though the above statement cannot be applied universally, it very well describes the situation of many underdeveloped countries. It must be stressed that the prevalence of uneconomically sized, shaped or dispersed farms greatly raises the costs of efficient land use in an area. The smaller, the more fragmented and uneconomically shaped the farm is, the more expensive is production since cultivation and harvesting are more complicated; the supervision of labor is either more expensive or insufficient, and proper drainage or irrigation is often impossible. On the other hand, in the large land holdings, total agricultural production hardly ever reaches the maximum gross production which is technically possible.[19] Hence, in systems as those described above, increasing economies of scale are the exception and not the rule.

A fall in agricultural production due to changes in farm sizes is a real possibility in the short-run. However, how much of this decrease is

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[18] E. O. Heady, Techniques of Production, Size of Production Units and Factor Supply Conditions, Conference on Relations between Agriculture and Economic Growth, Stanford University, November 11-12, 1960, 16-20.

[19] Erick H. Jacoby, Interrelationship between Agrarian Reform and Agricultural Development, FAO Agriculture Study No. 26 (Rome, 1953), 20-22.

attributed to agrarian reform, is a question that can only be answered in the totality of factors hampering agricultural development, and it is precisely for this reason that the concept of integral agrarian reform is so important.

Finally, reforms involving changes in the pattern of land distribution in holdings of a given size may bring very striking and important changes in land use which may affect agricultural production and the whole economy. Rotational or mixed farming may replace monoculture, annual crops may replace perennial ones, etc. Different approaches to land utilization may increase production which is more profitable with the resources available.

The profitability derived from an expansion of output due to a different pattern of land utilization can be explained in terms of what is produced. There is the distinction among crops in terms of their importance as export earners, import savers, or nutrition improvers. This distinction is basic in appraising the effects of agrarian reform on output. After agrarian reform, the yields or output of export may fall. But his may be interpreted as a shift to crops for domestic consumption or import savers. Agrarian reforms may promote a new emphasis on food crops of a high nutritional quality which are so important in improving present dietetic conditions of less developed countries.

A successful agrarian reform can provide not only the necessary conditions for technological innovations, but also the possibilities of allocating resources more efficiently and changing the pattern of land use.

CHAPTER V

AGRARIAN REFORM AND CAPITAL FORMATION

In economics lierature much has been written about the importance of capital formation in economic development. One of the main economic arguments for agrarian reform as distinct from the social argument for more equality, is the probable contribution of agrarian reform to capital formation in agriculture and its impact on development in general.

The economist's interest in agrarian reform focuses on the possible effects of agrarian reform on the propensity to save and invest, in other words, with the theory of investment. Whenever tenure conditions contribute to the maintenance of a low level of production and to a low rate of income per capita they will also restrict the rate of savings and investment. Thus, a good tenure system should allow the farmer to increase his productive investment and progressively to improve the efficiency of his production.

This chapter focus its attention on the issue of capital formation in agriculture and how agrarian reform influences it.

The Nature of Capital Formation in Agriculture

A clear understanding of the capital-formation process that leads to agricultural development is essential. In the early stages of agricultural development there are slow gains in capital formation. Investment decisions are typically made in small segments, spread over many seasons or gestation periods. There seems to be an apparent stagnation in the rural sector because nothing appreciable happens although small but significant capital input investments take place. It contrasts with the visible and impressive investments made in other sectors of the economy, eg., hydro-electric dams, steel mills, roads, etc.

According to Philip M. Raup, capital formation in agriculture is rarely concentrated in a spatial sense, and its formation is heavily weighted by the time dimension. It accumulates by an incremental process that it is best described as accretionary.[20] A good example of such a process is a nation's livestock herd, the stock of farm capital (buildings, fencing, water supply, etc), soil improvement and conservation, and permanent crop cultivation. Consequently the volume of agricultural investment is very much influenced by the nature of this process.

Basically, the transformation of agriculture is dependent upon investing in agriculture. The form in which investment must take place is decisive in agricultural development. Investment that would increase output per area is one of the most important ones in the short-run. However, from the point of view of agriculture as a whole, long-run farm production per person has much to recommend it as the best single measure.

Accretionary forms of agricultural capital formation are the important ones in the early phases of development and in the latter ones. Nevertheless, it takes time for these accretionary processes of capital formation to work themselves out. Where capital stock is biological in nature, the limits within which capital formation can be accelerated are relatively fixed too.

Agrarian reform policy for optimum growth in those phases of development should create patterns of production, consumption and investment that maximize accretionary processes.[21] It must be clarified that a policy that emphasizes increases in output per man, does not preclude the inclusion of

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[20] Philip M. Raup, "The Contribution of Land Reforms to Agricultural Development: An Analytical Framework", Economic Development and Cultural Change XII (October, 1963), 7.

[21] Ibid., p. 8.

another one of a long-run nature that underscores investment in biological processes as livestock, hogs, etc., or in long-term, lumpy or movable (tractor), and highly innovative kinds of investment. As a matter of fact, land improvements, drainage and irrigation systems are labor intensifying innovations which increase both output per area cultivated and labor productivity.

The Implications of Tenure to Development

There can be no doubt that tenure conditions influence the volume of capital available for productive investment and the extent to which it is productively channeled in agriculture. In particular, the problem of capital formation in agriculture is related to that of security of tenure or the exclusive right of an individual or group to the use of a productive asset.

The security of tenure, is not only important for the introduction of technological change in agriculture, but is crucial for investment in biological forms of capital, for slow-maturing enterprises, and for undertakings involving numerous incremental additions made successively over many production cycles. A system of tenure that makes these rights of use and reward specific to the user is a necessary but not a sufficient condition for capital formation. A farm unit must also be large enough to enable the holder to achieve a surplus, and must endure long enough to motivate him to reinvest it in the farm enterprise.[22]

There are several ways in which the tenure arrangements under which productive resources are held and used will affect the pattern of consumption, savings and investment in the farm unit:

1) By their influence upon the operators' time preference for money income.

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[22] Philip M. Raup, "Land Reform and Economic Development", Agricultural Development and Economic Growth, ed. H.M. Southworth and B.F. Johnston (Ithaca: Cornell University Press, 1967), VII, 273.

2) By their influence, over time, upon the allocation of expenditures between the farm firm and the farm household.

3) By their influence upon the allocation of expenditures within the farm household as between goods and services for direct consumption and expenditures upon the family residence.

4) By their influence upon disposition of the total available labor time of the farm family.

5) By their influence upon attitudes and uses made of credit.[23]

The implications of these factors are particularly relevant to a peasent-type or family farm system where agricultural units are a mixture of owner-operated farms with units operated by tenant farmers under different tenure conditions. It is also relevant in co-operative systems where the individual farmer has a lot of freedom in his alloted plot. For collective or state farms only number (4), appears to be important in this context.

Land tenure arrangements influence the allocation of labor time. The producer can invest his labor in the farm or in the household. He can invest in a productive asset (capital) or in consumption. The time-span becomes important in making such decision, whether the farmer takes the short or long-run view.

From the standpoint of capital formation, the most important characteristic of the family farm is the decision to allocate the income flow between current consumption and reinvestment in the farm as a basis for later income and consumption. In the family farm, every act of consumption means a decision not to invest in the farm. When uncertainty is high, the maximization of household satisfaction over the utility of forthcoming income in

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[23]Raup, "The Contribution of Land Reform to Agricultural Development: An Analytical Framework", 9.

the future prevails. With adequate security of tenure, the operator has a choice; the time-possibility curve is at a higher level. He can balance the alternatives of maximum return overtime from slow-maturing enterprises against possible lower-yielding but quickly turnover investment. It is possible for the operator to make long-term investment or place high value in conservation measures.

The prospects of long and secure tenure arrangements provides the conditions upon which the family labor is geared toward productive employment. Much capital formation in agriculture is warranted in this way. Livestock care, improvements in irrigation systems, drainage, soil conservation, rural housing, are among the many activities in which labor contributes to capital formation.

Land tenure systems very strongly influence the manner in which leisure time is disposed. This problem would be discussed in the next chapter. Suffice it to say that secure tenure systems can utilize labor more effectively in situations where there is some surplus labor, or where there is work-time wasted due to few accesible productive resources arising from the small scale of the operation. A key to the process of agricultural capital formation lies in the use made of this periodically available labor. In terms of capital creation, the best tenure system is that which creates the maximum likelihood that the family farm will decide to invest its own labor.

The capital-forming potential of agrarian reform interrelates with other factors. As income or consumption possibilities or expectations climb due to tenure security, the individual places less value on current as compare to future income and consumption. At very low income levels or expectations that income would fall, decisions regarding consumption versus investment in the farmhold would tend to lean toward the maintenance of family con

sumption levels. The levels of living are maintained at the expense of deterioration or destruction of land and capital resources, as is the case in dwarf holdings and scatter and fragmented plots of land. High consumption goals and uncertainty about the course of future income are factors inhibiting capital formation.

In land tenure systems as those prevailing in Latin America where a large portion of agriculture's earnings are diverted into unproductive expenditures by landowners such as in conspicuous consumption, land speculation etc, a change in tenure (redistribution of land) might bring about a better allocation of capital. It is possible that income redistribution would enhance the farmers' time indifference curve denoting consumption or income possibilities, so that, investment can take place. The increase in investment would depend on how such larger income is spent by the beneficiaries of land redistribution. Complementary measures can improve the conditions for capital formation in any agrarian reform scheme. The effects of changing incomes of the farm population and their influence in other sectors of the economy are discussed in a separate chapter.

The generation of new attitudes toward facilitating the absorption of outside capital (credit) and debt repayment is another major contribution that agrarian reforms can make to capital formation. Taboos against debt payment are a common characteristic of predominantly agricultural societies. The attitudes that relate debt payment ability to increased output is a very important requisite for agricultural development. Agrarian reform can make a tremendous contribution in that respect. It can also laid the foundations for the establishment of supervised production credit by providing the conditions upon which supervision is acceptable to the farmer.

Agricultural credit institutions are not strictly speaking a part of

the tenure structure itself. Yet, credit and tenure are so closely related that a given situation in one determines the way in which the other can function and develop. In this sense, the development of supervised credit schemes and ordinary credit facilities, have been a prominent feature of successful agrarian reform. Without it, new incentives to invest family labor may be of little value if the farmer does not have access to credit which permits the purchase of agricultural supplies. Secure tenure can lead to stagnation if farmer's attitudes and institutions do not provide credit and encourage them to use it. Again the importance of integral agrarian reforms is evident.

These optimum conditions for capital formation in agriculture have been presented in terms of the owner-operated family farm. Although this is not the only form of land tenure in existence, it is representative of tenure conditions in developing countries where a vast number of small farms predominate, either in densely populated areas as in Southeast Asia, or in sparsely populated countries as in Latin America and parts of Africa. Despite the obstacles to capital formation or technological innovation, that many of these small holdings give rise to, in the actual and inmediate future conditions of many of these countries, agricultural development has to take place in small scale units. The economic size of many farms as well as the physical size of others, can be increased by redistribution and consolidation measures creating new operating units capable of generating surplus above subsistence or tenancy reform leading to the introduction of new techniques.

Farms operated by tenant farmers constitute another important tenure form. Secure tenure arrangements by making leases specific to the operator, can encourage long-term investment. In economic theory, the model for this form of lease-hold tenure is typically presented in terms of a cash lease,

for a period long enough to encompass at least one cycle of crop rotation or animal production. There are few countries in which such a scheme is a reality. In developing countries, for example, they are very rare and short-term-share lease are more common. What are the implications of this tenure form to capital formation? If the landlord provides only the land and buildings and the tenant's contribution is limited to labor, livestock and equipment, the incentives to make improvements on the land are limited. If the landlord provides everything the situation is worse.

Collective and state farms are another important form of tenure. Their contribution to capital formation lies in at least three aspects:

1) They can more easily mobilize labor in the agricultural slack season for work on projects like major irrigation works, drains, roads, soil dressing, etc.-works which provide essential external economies and require little capital and a lot of labor. (It is able to allocate labor-time easily).

2) By consolidated management, credit can be easily absorbed for productive purposes and long-term investment is made much easier because risks are borne collectively.

3) The surplus available for investment may be blocked up into usable amounts since the decision-makers are not faced directly with the investment-consumption matrix.

Of course these are potential advantages for capital formation in collective farms. Its success in increasing investment depends, as it was the case with the family farm, on the degree to which it can provide incentives for capital formation. A strong argument against the establishment of collective farms is that it weakens the incentive to work, by destroying the intermediate connection between effort and reward. It would be more accurate

to say not that incentives are weakened, but that different kinds of incentives are required to make them more productive.

The co-operative approach offers good potentialities for agricultural development. Co-operatives can promote capital formation in agriculture in at least three ways:

1) Co-operatives provide its own motivation, they generate its own power, in a setting in which is extraordinarily difficult to enlist the interest and active participation of the intended beneficiaries. By appealing to the self-interest and by enrolling rural producers as active participants in decision-making, this stimulates initiative and gives them the will, and the means to shape their own future.

9 2) Co-operatives can give farmers the security needed as an incentive to improve their holdings by negotiating collective agreements with the state or private landowners on conditions of tenure and rent. And co-operatives can facilitate investment in the land through co-operative projects for land clearing, cultivation, cropping, irrigation, drainage, consolidation of fragmented holdings, housing, etc.

3) Co-operatives facilitate not only the absorption of agricultural credit through co-operative effort, but also because they provide the incentives and the instruments for individual savings leading to short-medium-and-long-term investments in agriculture.[24]

A well designed agrarian reform policy can increase both the opportunities and incentives for capital formation in agriculture. It can do so by allocating labor-time to productive purposes. This not only has a direct impact upon capital formation through the incentive it provides, but also by

[24] Leonora, Stettner, "Co-operatives and Development Strategy", Annals of Public and Co-operative Economy, XXXVI (October-December, 1965), 503-504.

increasing income expectations and creating favorable conditions for the absorbtion of credit. Its effects are clearly evident in the case of owner-operated family farms, but they can also be accomplished in a tenant-operated farm system, in a co-operative system as well as on collective farms.

CHAPTER VI

AGRARIAN REFORM AND EMPLOYMENT

The relationship between programs of agrarian reform and employment possibilities is currently receiving more recognition than it did in the past. Agrarian reform may be designed not simply to alter the distribution of wealth or income, but also to improve the technological level of agriculture, to increase capital formation and realese productive energies in rural areas.

Considering the large proportion of the active labor force engaged in agriculture, the rapid rate of population growth, and the rather limited prospects for a considerable expansion of employment in the non-farming sectors of developing countries in the immediate future, it is generally the case that the agricultural sector itself must provide more employment opportunities, not only to absorb new entrants in the labor force, but to lessen the low levels of unemployment and underemployment in agriculture.

It is not likely however, that the traditional agrarian structures prevailing in most developing countries can provide suitable employment opportunities for the rural population without undergoing a major institutional change. In this case, agrarian reform may well be a necessary condition for achieving greater employment opportunities. Designing agrarian reform programs to provide more employment requires careful planning not only in regard to population and labor force factors, but also to other specific ones such as the nature of tenure patterns, the size and structure of farm units, and the type of technological change and production to be introduced. Each measure must be appraised in terms of its impact on employment as well as on social and economic development in general.

This chapter will examine, briefly, the problems of employment in developing nations, the tenure arrangements hindering employment opportunities and the agrarian reform measures which may be called in this connection.

The Problem of Rural Employment in Developing Countries

Underemployment is a major cause of rural poverty in a good many parts of the world. It is not surprising then, that recent literature about economic development be concerned with this problem. No one doubts its existence even under different assumptions and definitions, but a lot of disagreement prevails in regard to, whether the marginal productitivity of labor is zero or approaches zero. Much of the confusion arises from the nature of rural under-employment itself which is at least of two different sorts: (1) that which stems from non-tenure factors affecting the level of employment, and (2) that which originates from tenure institutions. Hence, before considering tenure factors per se it is worth examining some of the alternative explanations to this problem. Two will be singled out: (1) the "leisure-preference" explanation, and (2) the employment possibilities in agriculture arising from the availability of productive resources, and the nature of the agricultural process itself.

It often has been argued that the picture of the typically peasant agriculture in developing nations of a zero marginal productivity of labor is very much exagerated, that empirically the marginal productivity of labor can be shown to be often greater that zero and that, the reason for underemployment, lies in the consumer preferences or aspirations of farmers.[25] Once a

[25]For empirical testing; see, T.W. Schultz, Transforming Traditional Agriculture (New Haven and London: Yale University Pres., 1964), 61-70, and N. Roestner, "Marginal Comments on the Problems of Underdeveloped Countries", Hamburg (May, 1954). In regard to consumer preferences; see, J.W. Mellor, "The Uses and Producitivity of Farm Labor in Early Stages of Agricultural Development", Journal of Farm Economics, XLV (August, 1963), 517-534.

man's basic subsistence needs are met, he is reluctant to work more for small increments in income that may be obtainable. In other words, there is a seling, so to speak, to the peasants consumption demand, or in Alexander Chayanov's analysis of peasant economy, once the labor-consumer balance is attained the peasants are unwilling the excersize more labor.[26] They enjoy leisure and attach value to it. It is doubtful, however, whether too much importance is placed on this phenomena of the backward-slopping supply curve of labor or Chayanov's marginalistic approach, in explaining underemployment conditions in today's developing countries. There are few parts of the world that come near Mellor's assumed isolated, backward, low aspiration rural environment or the pre-revolutionary peasant conditions of czarist Russia upon which Chayanov's work was based. Today, the demonstration effect, commercial advertising, and the spread of universal education, are altering the consumption patterns and the expectations of people around the world. The circle of poverty of today's developing countries lies in the unfulfilled aspirations of rural and urban people in the face of rigid supply structures. In any case, there is evidence that a good deal of rural idleness in developing nations is enforced. Most of the world's farmers would do more work if given the opportunity.

The ability to provide opportunities for employment in agriculture, as elsewhere in the economy, depends on factor proportions obtained on individual holdings, and on the existence of productive factors, eg., land,water, capital, management, technology, entrepreneural skills, etc. Other things being equal, the greater the cultivable area (combined with suitable water resources) available per head, the greater the number of agricultural employ

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[26] Alexander Chayanov, The Theory of Peasant Economy (Homewood: R.D. Irwin Inc., 1966), 70-84.

ment possibilities that can be created.

There are at least two relationships which determine the possibilities for remunerative employment in agriculture--one between total population and land resources and the other between the existing labor force and land resources.

Of the two relationships, the first--land available per head of total population--is more frequently cited, but for the purposes of determining employment possibilities it is a less useful indicator. The relationship is useful in connection with the analysis of the degree by which a country or region can provide its population with adequate foodstuffs, raw materials, etc. It also makes a rough correspondence between population density and land productivity. More significant is the second one.

To illustrate the point, in countries where the ratio of arable and agricultural land per head of active agricultural population is high, the agricultural sector can effectively employ those engaged (fully or partially) in this sector, as well as those who may be added to the work force during the period in which the absolute number of the active agricultural population is expected to increase.[27]

Under present conditions, the average amount of arable land in hectares per worker is, 35 in North America, 40 in Oceania and 23 in Argentina, that is, land resources are adequate to expand employment. On the other hand, the same ratio is: 1.0 in the Far East, 0.5 in Mainland China, 2.9 in the Near East, 3.0 in Europe, 3.1 in Latin America, 4 in the Soviet Union, and 5.1 in Africa, which means that land resources are not fully adequate to employ the

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[27] M. J. Sternberg, "Agrarian Reform and Employment, with Special Reference to Latin America", International Labour Review XCV (January-February, 1967), 5.

existing agricultural population. In the Southeast Asia region, the problem of underemployment is more accute since it is possible to affirm that there is not enough land to keep the rural population occupied, whatever the pattern of land distribution.

This may be true at any particular time, but the other factors--capital, technology, education, etc., may not be as limited as land. The problem of overpopulation may be solved: first, by a more intensive use of land, and second, by expanding non-agricultural work opportunities. In both cases tenure institutions can affect the possibilities.

Europe and Japan provide an example where low land-man ratios have been overcome by the intensive use of land. Technological change can be affected indirectly as described in Chapter III by adequate tenure institutions. In countries suffering from underemployment problems, the intensification of their agriculture by the adoption of new techniques, seems to offer a good solution to the employment problem.

Similary, the opportunities for non-agricultural employment, though largely determine outside the agricultural sector by how fast the level and kind of investment is taken place in industry and services, are also affected by the institution of land tenure. This is particularly relevant in economies where the expansion of the non-farming sector has been slow.

In countries where land-man ratios are not excessively low and posses good land resources, as in the rest of Latin America, parts of Africa and some countries in the Middle East, underemployment is structural due to a mal-distribution of productive resources. Redistribution schemes that change factor proportions can contribute to enhance employment opportunities.

Finally, underemployment can be cyclical. To a certain extent, it is caused by the biological nature of agriculture itself and to the inefficient

play of market forces in developing countries.

Land Tenure Institutions and the Level of Employment

It is not difficult to assert that land tenure institutions are often responsible for a low level of employment. The relevant factor may be either the form of tenure under which land is held or the actual distribution of land.

As for the first factor, an insecure tenant, sharecropper, or squatter, for example, may be unwilling to invest in the forms of investment necessary to make a more intensive use of the land and a better use of labor available. Again, landlords may insist that their tenants grow certain crops that do not offer good possibilities for the most intensive use of the land available given the existing level of technical knowledge and skills and other resources. It is possible that if a tenant is made into an owner-farmer, he may switch to a more labor-intensive crop which also increases his income. An example is the switch from wheat to cotton in the Laguna region, after agrarian reform, in Mexico.

Where there is overpopulation and land resources are not very well distributed, the adverse effects on employment opportunities are not difficult to substantiate. Even where there is a good distribution of land, insecurity of tenure can prevent the introduction of investment necessary to increase output and the better use of the available labor.

Similary, if the land is held in large units operated by hired workers, limitations on employment are imposed in several ways. First, in certain types of plantation that concentrate in a specific product (monoculture) for export, large amounts of unused land are held in order to wait for better developments in export markets. This pattern of land utilization is conducive to a poor utilization of labor since that land could be used in some other

crops. Cuba was a classical example. Second, the cropping patterns of many plantations produce seasonal underemployment because of high peaked labor demands in certain times of the year (harvest time), and a very prolonged slack season. Third, it is by no means uncommon that plantations use labor-saving production methods which permit them to have high ratios of output per cultivated area and output per worker. Yet in the conditions of many developing nations it has very adverse effects on employment. Fourth, if the land is held in large units, limitations are imposed on the crops which may be grown. Tobacco, for example, because of the care and conscientiousness required of pickers to ensure that the right leaves are taken at the right time, is more adapted to small operating units-owner-operators, sharecroppers, etc--than to large untis worked by wage laborers. Similary, intensive livestock production is more likely to be promoted by a system of small holdings rather than large estates. For example, milk production in Israel, pig-breeding in Poland, etc.

This parenthesis constitutes a preamble for the analysis of situations affecting employment due to an uneven distribution of land. Farmers in good many countries, Latin America for example, have very little land to occupy their time with because the land is concentrated in large estates, either not farmed at all or farmed in a way which, while satisfactory to their owners, does not maximize either employment opportunities or output per unit area.

Thus, such tenure structure makes it possible for underemployment and unemployment of human resources-as well as the underutilization of land or the destructive use of land-to exist in agriculture despite sufficient resources (favorable land-man ratios). On the one hand, small-holdings or the minifundia cultivator, is unable to purchase land or capital in sufficient quantity to enable him to work productively at least the whole year. On the

other hand, in large holdings with abundance of land, with good access to credit and capital intputs, labor is underemployed. This is true not only of temporary hired labor (which are dismissed afterwards producing unemployment rather than underemployment), but more specifically where there is a resident labor force composed by sharecroppers, insecure tenants and wage laborers and their families, known as colonos.

To illustrate the situation, in a recent study made by the Inter-American Committee on Agricultural Development(C.I.D.A.) in Chile, to show the possibilities of increasing employment, estimated that, if other holdings followed a product mix on arable land similar to that found in sub-family farms (employ less than 2 man-years of labor), the actual agricultural force on all farms could be fully employed, and that it could even be increased by 10 percent on family farms (employ 2 to 4 man-years of labor), by 80 percent on medium farms (employ from 4 to 12 man-years of labor), and by 130 percent on large farms (employ more than 12-man-years of labor). Such increases could not only absorb the underemployed on the sub-family farms but also provide more than 400,000 additional jobs; that is an increase in effective employment of over 75 percent for the nation's agriculture.[28]

Agrarian Reforms and Employment Opportunities

The remedies for the conditions just described are more ore less implicit in the description of their causes. If agrarian reform is to aim at creating more, and more remunerative employment opportunities it must attempt to create tenure forms and systems that provide such motivation. All the major tools of agrarian reform-land redistribution, consolidation of fragmented holdings, regulation of tenure forms, income redistribution-as well as

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[28] Ibid., p. 13.

complementary measures, must be brought into play if employment goals are to be achieved. Before discussing how specific agrarian reform measures increase job opportunities, it is worthwhile to mention at least three aspects which reforms must provide: (1) security of income, (2) security of employment, and (3) good work relations.

The primary aim of any agrarian reform program must be to provide employment and the opportunity to do useful and intrinsically satisfying work, but also the means to secure a steady income flow. A reform which turns a tenant into an owner-cultivator makes him richer at least by the amount of his former rent. Tenancy legislation controlling rent lease conditions, can have if enforced, the same effect. If the reforms are accompanied by other measures designed to improve farmer's production, then he may have more goods to sell. Thereafter, however, it all depends on the marketing conditions and price policies of each individual country. Consolidation measures by allowing the farmer to make possible more rational use of his land also is conducive to the fuller utilization of his labor.

Improving the farming conditions of agricultural laborers in plantations and big estates, is a step forward for securing them more remunerative work. Of course, the betterment of working conditions is only one aspect in the determination of their income. The laborer market situation, their productivity, and the selling price of the product produced are also important factors.

Security of employment needs little elaboration. A farmer sharecropper, squatter, etc., may be protected or made into an owner-farmer and achieve a greater security of livelihood as a consequence. Similary, a former hired worker gains more security if he shares profits in a plantation or hacienda, or becomes a member of a collective, co-operative or if he is made owner of

a small plot of land or even a conditional lessee.

Finally, the third aspect concerns the social relationships which agrarian systems of production involve. Reforms may be carried out not just to give farmers more employment, greater income or increased security, but to give them a sense of dignity, the privileges of full citizenship, a greater meaning of personal freedom and the realization of being useful members of the society in which they live.

Specific Measures of Agrarian Reform

Tenure legislation. Improved tenure security that allows the farmer to make a more intensive use of the land and which provides enough incentives to invest, opens the possibilities for utilizing fully his family labor.

Redistribution of land. The possible effects on employment opportunities are likely to be greater in a land redistribution program than in a mere tenure legislation reform. In conditions as those prevailing in Latin America, the key to the employment problem is to be found in the subdivision of the large holdings which have underutilized resources. How these holdings are transform, will determine the success of any program of agrarian reform in relation to employment and other specific goals. There are several ways in which working opportunities may be increased.

The first alternative seems to be geared to the limitation of the size of holding a given individual or society may own or operate, which has as its most obvious effect the liberation of land for redistribution. This is possible where there are plenty of under-utilize large estates to be broken. The possibilities for employment are dependent on how viable is the economic size of the unit. Farm management experts should advise on land redistribution schemes, the ways to match a farm size and a cropping pattern so as to

provide steady employment for a labor force of family size proportions.

The creation of family farms has been the main goal of most land redistribution programs around the world. The extent to which these farms can contribute to employment and to an intensification of production, depends not only on the size of the holding, but how effective ancillary measures are provided to the new beneficiaries. Much failures in family farm schemes have been due to the lack of complementary measures (credit, extension, inputs, etc.) and to the small number of farms created.

Most of the unfavorable side effects arising from the purchase of big estates and their division into family farms can be avoided, if land is available in large quantities, by giving the land to dependent workers already settled on the estates' land, and the rest to landless laborers and neighbouring minifundistas that depend on the large estate directly or indirectly.

The other general problem of unevenly distributed land, is the vast number of dwarf holdings (minifundia) in existence. To solve the employment problem on these units, a distinction has to be drawn among them:

1) There are units, though small, that possess a good natural resource base and which are in conditions to attain acceptable levels of income, if additional land is allocated to them.

2) There are others that have enough land, but lack sufficient resources to employ labor fully, adopt new techniques, etc.

3) There is the "pure" minifundio, lacking access to productive resources but also having a very unfavorably land-man ratio.

With respect to areas of pure minifundio the problems are undoubtedly greater, as in general, they are isolated from markets and new employment opportunities. The solution to their employment problem is some migration to areas where land is available or to new settlement areas, or-if the solution

is sought outside agriculture--to urban areas where non-agricultural employment is available. It is advisable that in order to enhance their employment opportunities, educational programs should be pushed throw in these areas since in certain countries they are very concentrated geographically.

In regard to the other two types of small holdings, they can be developed in situ through consolidation of fragmented holdings, the limitation of subdivision by inheritance or sale, crop diversification, credit, investment in human resources, and the provision of development services to provide the small farms with needed external economies. The creation of co-operatives or collective farms are possibilities not to be overlooked, especially in densely populated areas.

In plantations which are intensively cultivated but have adverse effects on employment, there are several ways in which the volume of rural employment can be increased. The creation of profit-sharing arrangement as in Puerto Rico, as well as the formation of trade unions (Honduras) can promote a greater security of employment, higher incomes, and better working conditions for agricultural workers.

There is a well-founded fear that attempts to reform plantations, would frequently result not in an increase, but in a decrease of employment and production, especially if they are efficiently operated contributing to the national economy and bringing in much-needed foreign exchange. There is probably some exaggerated fear in this, but if plantations limit employment and efficient land use practices, reform proposals so as, "On the one hand, resources (land) can be reduced and put into production by expropriation or other reform measures. On the other, incentives can be provided, or sanctions applied in order to intensify production still further in line with their potential capabilities, certain major changes in the organization,

either of such holdings or of the tenure system itself, can be applied".[29]

The last problem of seasonal or cyclical unemployment and underemployment could be reduced by a greater agricultural diversification. This could be accomplished through some sort of regional specialization--the development of new units of complementary specialization--or by a diversification of the cropping pattern inside the farm unit through mixed farming (crop and livestock production) and other combination that prevent high peaked labor demand during the year.

Harvest time can be increased, by different types of investment, such as supplementary irrigation. In many instances, such proposals need not to be costly construction programs, but could be based in small projects dealing with the construction of simple canals, pumping-well, dikes, etc. As it was pointed out in Chapter V, the mobilization of labor for these purposes was important for capital formation as well as for the full utilization of labor.

The implementation of an integrated public works program to create social fixed capital and rural employment should be linked closely with one of agrarian reform. Thus, it can be argued that a potential advantage of a collective farming system or a co-operative one (especially in densely populated areas) is that the surplus labor is concentrated in usable units and can be readily available for employment in other activities in the rural sector.

Finally, the diversification of cropping patterns or regional specialization, can be achieved more successfully by land redistribution, where employers of labor in large estates and plantations solved their employment problem by dismissing their workers in the dead season. A change to an ow-

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[29] Ibid., p. 22.

ner-cultivator system may increase the incentives to diversify production (livestock and crop production). Of course always some complementary measures are needed.[30]

Agrarian reforms aimed at increasing employment very according to the existence of productive resources and their distribution as well as on tenure relations. Some employment policies may not lead to maximum income per worker, or to the maximum rate of technological change, but the best it can achieve is a compromise among a variety of objectives not all of which are necessary compatible.

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[30]Background for this section: Thomas F. Carroll, "Reflexiones sobre la Distribucion del Ingreso y la Inversion Agricola", Temas del BID, Ano I, No. 2 (Agosto, 1964), 31-33; United Nations, Social and Economic Council, Progress in Land Reform, (FAO-OIT, 1966) (New York, 1967), pp.138,145.

CHAPTER VII

EFFECTS OF AGRARIAN REFORM ON GENERAL ECONOMIC DEVELOPMENT

The preceding chapters have considered the effects of agrarian reforms on specific factors important in agricultural development-technical progress, increased output, capital formation and the nature and level of employment opportunities. This chapter will attempt to present a more general view of the ramifying effects of agrarian reforms. It would be mainly concerned with major land tenure adjustments such as land redistribution measures which affect in one way or another a large segment of the rural population, and thereby involve considerable changes in the general framework of the economy. The discussion will be divided in two parts: firstly, the effects on income distribution within the rural sector and, secondly, the effects on other sectors of the economy as a consequence.

Effects on Income Distribution

In economic theory, the problem of income distribution consists in analysing the causes that determine the division of national income among different factors of production. From the point of view of the economy as a whole, the distribution problem can be discussed from different angles. first, a given distribution can be measured or quantified such as the distribution of gross national product by productive sectors, national income at factor costs or that of personal income. In other words, it is a statistical problem of how to measure a given income distribution. Second, the causes or forces that determine a given income distribution pattern can also be analysed. Third, income distribution can be viewed as a problem of political economy signifying the implicit recognition of changing it through different economic measures.

The problem of income distribution as a goal of political economy and

its probable relationship to economic development bas not been recognized by economists until recently. The classical economists, for example, assigned very little importance to the problem of income distribution in the process of economic development. When discussed, it fell in the realm of social ethics or morals. For them the distribution of income was a residual or marginal problem to be treated after wealth (output) has been maximized which was tbeir main economic goal.

Marshall recognized the problems created by the great disparities in incomes, but saw the goals of maximizing output and a better income distribution as competitive rather than concomitant or determinant of economic development. According to Marshall the provision of education, health, services, cheap food, etc., were corrective measures for those individuals who were economically, physically, mentally or morally incapable to fulfill "a good day's work with which to earn a good day's wage."[31]

To Marxian economics, the capitalist's system of production was responsible for the pattern of income distribution in the economy, which in turn, created class differences. Their answer to the problem was a change to a socialist economy that would assure a maximum rate of economic growtb, but the main argument was based on efficiency considerations.

Not until Keynesian economics recognized the relationship between income distribution and the level of employment via the marginal propensity to consume, that the problem of income distribution received some attention by economists. Even those preocupied with the problem of development economics have neglected somewhat the relationship between income distribution and economic development.

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[31]Alfred Marshall, Principles of Economics (London: Mcmillan, 1967), p. 714.

The experience of many developing countries, however, with special reference to Latin America, has induced many economists to the belief that a better income distribution has a strategic role in the promotion of economic development. This is more true if great disparities in income distribution prevail.

It is characteristic of a dynamic economy undergoing a change from a predominantly agrarian economy to an industrialized one, that differences in income distribution should exist. But, to what extent? It is possible to conceive such an uneven distribution of income that presents an obstacle to economic development, either because it is conducive to economic stagnation or because it only permits a very low rate of economic growth, below the potential expansion of the economy. The case is particularly relevant in dual economies where the low income sector has limited possibilities for expansion. Here, redistributive measures such as agrarian reform--that changes the allocations of resources in agriculture or transfers resources to more productive channels--can be a stimulus to development.

The criteria upon which agrarian reforms are formulated always carry within the distribution of income. This is so because the cornerstone of any agrarian reform program is the redistribution of property that generates income, power and opportunities which benefit those who till the soil. All of this, however, is determined by the nature of land tenure arrangements.

In considering the effects of agrarian reform and income distribution, it is helpful to establish the connections between tenure and income distribution. There is actually an identity between income distribution and the institutional arrangements that provide individuals accessibility to the annual income stream. These institutional arrangements are call tenure factors-

broadly defined.[32] Access to the future income in any society has two dimensions: (1) the initial access route, and (2) the continued security of such access.

The initial access to the potential income stream of society, takes many forms. One of the ways to such access is provided by the private ownership of resources. In any society (except in slavery) every man owns his labor and is free to contract it and thus secure access to the income stream. Yet mere ownership of one's own labor does not assure security of access to the income stream if the owners of other resources required to make labor productive, do not demand this man labor; the ownership of other factors of production (land, capital, skills, etc.), assures a more secure initial access to the future income flow.[33]

The initial access to future income must be preserved so as to gain a continous security of such access. For example, a farmer may have good access to income via ownership but his security of tenure access may be diminished greatly if he fails to keep up with production techniques, or lacks access to credit, etc. In essence, it means that alternatives for making a living (the initial access) as well as the developed capacities to exploit them (the security of access) must become for the individual or group, realistic opportunities. These opportunities are a function of the particular institutional arrangement of the society.

In agricultural societies, the systems of land tenure determine such

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[32]By institutional arrangement we mean and accept the definition developed by John R. Commons, as, "The social practices or working rules by which collective action restrains, liberates and expandas individual action", Institutional Economics (New York: MacMillan, 1934; Madison: Wisconsin University Press., 1959), p. 73.

[33]This discussion is based on an article, by Peter Dorner, "Land Tenure, Income Distribution and Productivity Interaction," Land Economics, XL (August, 1965), 248-251.

initial access, and to a certain extent the willingness to exploit that access, which in turn affects, in various ways and degrees, the level of productivity.

If agrarian reform has any meaning, it must mean an improvement in the access that rural people have to future income and the security of such access. Under the tenure systems existing in much of Latin America, the majority of people in agriculture have a very feasible initial access route to the productivity of the economy, either because peasants do not own the land or because the income distribution derived from the concentration of land, does not permit it (as the minifundia cultivator who lacks sufficient resources). Once the initial access is lacking, the capacities to produce thereof are also jeopardized.

From the standpoint of political economy agrarian reform can be considered a redistributive measure. It shares many common characteristics with a large family of redistributive instruments such as public finance, taxation, inflation, subsidies, minimum wage policies, price supports, tariff protection, rationing, expropiation, nationalization, etc. Essentially, there are two premises which are important for understanding the effects of agrarian reform:

(a) Total income available for consumption and for capital formation in an economy is itself a function of the state of distribution.

(b) Chages in the state of distribution may increase the size of the total income to be divided or they may decrease it.[34]

If agrarian reform changes a given pattern of income distribution characterized by great disparities in income, it is probable that it would have

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[34] Edmundo Flores, "The Economics of Land Reform", International Labour Review, LXII (July, 1965), 30.

a positive effect on investment and consumption. The size of income may increase only if, the changes in land distribution are conducive to increases in the level of productivity in agriculture and to the nature and effect of redistribution of income from one group within the society to another. As was described in previous chapters, agrarian reforms are likely to create favorable conditions and incentives for increased productivity.

The conditionality of the above statement arises from the fact that successful reforms depend very much on the way they are carried out. This of course depends upon the objectives of different agrarian reforms. But, it must be clear that the problem of production is not independent from that of a better income distribution and viceversa. Both are mutually supporting measures essential to any program of agrarian reform and/or economic development in general.

The Impact of Agrarian Reform on Other Sectors of the Economy

Once the income distribution in agriculture has been altered to a substantial degree by agrarian reform programs, the joint and cumulative effects of all these changes create favorable conditions and incentives to growth in the economy. These effects of land redistribution measures on other sectors of the economy can be considered under three headings: (1) transfer of capital, (2) demand effects, and (3) population growth and the labor supply.

Transfers of capital. In countries with a fairly well-developed industrial or mining sector, where agriculture contributes less than half of the total national income, or have good access to savings or subsidies from abroad-Italy, Japan and Venezuela are examples of the former category while Taiwan and Puerto Rico of the latter-one can legitimately expect a land redistribution program to be accompanied by considerable investment in services to farmers, both of a strictly agricultural and of a general welfare kind.

Here, the agrarian reform program represents a transfer of funds from the industrial to the agricultural sector--a transfer which may be justified on profitability considerations (Italy, Japan) or may be justified partly as a distributive measure to equalize income between the two sectors as in Venezuela.

However, the most difficult problems are found in those countries which are trying to industrialize and achieve general economic development but suffer from severe capital shortages. Generally in these countries, agriculture is the largest sector of the economy and the need for investment funds in the non-agricultural sectors are so great that there can be no question of financing agricultural development programs, including agrarian reform, out of the other sectors. If economic development is to be realized a transfer of funds has to be made from agriculture to the non-agricultural sectors.

To achieve this, farmers must produce enough food and/or raw materials, to feed to non-agricultural population or to supply established or newly created industries. Two things are needed: firstly, and most obvious, agriculture must become more productive. The ways in which agrarian reform contributes to this process has been discussed at length in previous chapters. Secondly, before the non-agricultural sector develops the capacity to finance its own investment, savings have to come from farmers directly (or through foreign aid or the public sector).

This process known as the transfer of the agricultural surplus, has been crucial in the early stage of industrialization in many countries. Most commonly the process has been accompanied by/or has been facilitated considerably by a rise in agricultural production so that the savings from agriculture could be made available without a drastic reduction in the farmer's level

of consumption. Therefore, where agrarian reforms have led to increased productivity they have contributed a lot to industrialization. The effects of agrarian reforms on investment in other sectors of the economy, has been even greater when some complementary measures have accompanied those programs. This is the reason for stressing integral agrarian reform programs in developing countries. On tbe other hand, a great deal of the success of this process depends on, how the savings and the transfer of savings for investment is affected by tenure institutions. Agrarian reforms can drastically alter these institutions and consequently the effects on capital formation in the economy.

In a landlord-tenant system, or in a large estate or commercial plantation type or in a family-farm system, the possible sources of savings come out of profits, state taxation or compulsory state marketing systems and manipulation of prices. The modes of investment in the non-agricultural sectors have come tbrough investment b landlords as entrepreneurs or providers of equity capital, state investment and the direct private investment of profits by family-farm operators or tenant farmers. If those funds could be cbannelize to industrial development and to other sectors they can make a substantial contribution to development.

The fact remains, however, that in many countries, landlords and plantation owners, engage in conspicuous consumption and/or transfer their savings abroad. When they invest, they usually purchase land-in part because of the dangers of inflation, in part because of the social prestige attached to land ownership itself. Latin America is a good example. Thus, a land redistribution program that reduces tbe private demand of landlords and releases resources, on a large scale, wbicb can be utilize better by a great number of farmers, offers good possibilities for transfering resources to other sectors.

Another way in which profits could be made available is through taxation. A land redistribution program which sets up a tenure system composed mainly of family-farms can create the favorable conditions and the willingness of the peasants to accept taxation for economic development purposes. Although this manner of transfering resources may be easier to enforce after land redistribution has been implemented, it is subjected to administrative, financial and other problems that commonly inhibit development programs in poor countries.

It is possible to tax the few landlords that control the land, but they usually possess in adition to land, the political power to evade taxation measures. After a redistribution program landlords may change their investment behavior. Land, as something which is likely to be taken away by governments, ceases to be an attractive investment, quite apart from the difficulties caused by laws preventing the concentration of land after redistribution. Therefore, landlords are forced to invest in industry or commerce. The insecurity following the redistribution of land may increase their propensity to save in such a way that their net savings are greater despite their loss of income or even they may develop an entrepreneurial spirit in their enforced new interests. Such developments depend very much on the methods of compensation so as to provide them with incentives to invest in industry.

When agriculture is organized in collective or state farms, the problem of enforcing savings in agriculture for industrial development is greatly reduced. It is usually done through taxation of collective profits or with a system of compulsory food deliveries to state marketing bodies. The planned nature of their economies, then, facilitates investment in the different economic sectors. Much of the industrialization in the USSR has been accomplished in this way. Although less complicated it creates other problems related

to material incentives to produce. In order to avert the undesirable effects of compulsory savings in agriculture, farmers must have: (1) confidence in the development prospects open to them, (2) they must feel an improvement in their material situation as industrialization proceeds, and (3) the right kind of incentives.[35]

The communes such as the Kibbutzim in Israel, or the Ejido in Mexico, and the co-operatives in general, offer a good potential for transfering agricultural surplus. The main source of savings are the profits from commune operations and the surplus from co-operative activities. When an arrangement is made, in which the communes or the co-operatives, have some going concern in commune or co-operative industrial enterprises, the possibilities for investing outside agriculture are enhanced. The emphasis in rural industrialization by Kibbutzim factories has been very successful in Israel. A similar scheme should be tried in other countries. Forest industries, for example, are very promising in this respect.

Demand Effects or Industrialization. It has often been argued by those who oppose land redistribution measures, that they lead to an increase in rural consumption and to an over-all decrease in savings. In so far as the increase in the level of consumption is concern, it can act as a stimulus for industrial growth. The role of the so called "unused rural demand", is very important in pushing industrialization in developing countries. It is particularly relevant in those economies where narrow or small markets constitute a bottleneck to further industrial development. In countries, "where the farmers could readily produce more if only there were the incentives of finding things to buy and where craftsman would readily make thing for them to buy,

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[35] United Nations, Progress in Land Reform, p. 159.

if only the farmers sent enough cheap food to the towns, the initial push to get out of the "low-level equilibrium trap" may be provided by increased rural consumer demand, following a redistribution of income."[36]

In addition, an increase in the level of consumption of rural people derived from a larger income, can lead not only to an increase in the demand for consumer goods, but also for that of agricultural inputs, eg., fertilizer, pesticides, insecticides, agricultural machinery, etc. An expanded and dynamic agricultural sector can create, in Albert O. Hirschman terminology, a series of backward and forward linkages that accelerate the process of economic growth.

The effect of stimulating industry may be achieved simply by the redistribution of effective demand. Whereas in the past landlords purchased goods that were not produced internally, the farmer beneficiaries are likely to demand consumer goods that are produced by local industries, eg., textiles, consumer durables, construction materials, etc. There is, then, a positive effect on the balance of payments situation as well as on domestic demand.

As industrialization proceeds on a broad front and more employment opportunities are created in that sector, the long-run underemployment problems in agriculture can be solved easier. There is not the threat of further underemployment in the urban areas due to the slow growth of industry and other sectors. In the long-run, the mechanization of agriculture can also become feasible.

Even though the possibilities exist for an over-all decrease in the level of savings in the rural areas, it does not necessarily follow that the

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[36] Ibid., p, 160.

rate of savings and investment in the economy, would fall as was indicated by the expansion of investment on industrialization. It is also possible that the farmer beneficiaries may decide to consume more, but as Alfred Marshall pointed out, a betterment in the nutritional levels of the family labor is as a productive investment as that in horses or equipment.[37]

It must be stressed, however, that the redistributive measures intended to increase farmer's internal demand must be reinforced by those directed to improve his productive capacity. Only if agrarian reforms are able to increase farmers income, would the initial impact of income redistribution have a lasting effect. As was explained at the beginning of the chapter, the initial access to income must be accompanied by a continued security to such access.

Population Growth and the Supply of Labor. There are some who argue that land redistribution schemes by granting ownership of land to the farmers, increase their attachment to the land and over the long-run could reduce labor mobility for industrial development. It is argued that a family farm system which turn farmer tenants or laborers into landowners introduce rigidities that may prevent industrial growth.[38]

This argument against land redistribution can be disputed in two ways: firstly, the historic experience of Western Europe, the United States, Oceania, and Japan, shows that the family farm system did not prevent the movement

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[37]Alfred Marshall, Principles of Economics (London: Mcmillan, 1947), quoted in Ifigenia de Navarrete, La Distribucion del Ingreso y el Desarrollo Economico de Mexico (Mexico: Fondo de Cultura Economica, 1958), p. 18.

[38]Raleigh Barlowe, "Land Reform and Economic Development", Journal of Farm Economics, XXXV (May, 1953), 183; John W. Mellor, The Economics of Agricultural Development, (Ithaca: Cornell University Press., 1966), p. 259.

of labor from rural areas to the cities for the formation of an industrial labor force. Secondly, the trends of population growth in underdeveloped countries show that more work in agriculture will be needed in the future, since the possibilities for reducing the existing population in rural areas will take a considerable amount of time. The absolute number of rural people in these countries would remain high in the next decades. At the same time, migration to towns and inclusion in other occupations, is not necessarily a sign of change in the production structure but reflect the lack of employment opportunities in farming.

For these reasons, it is not necessarily true that a redistribution of land ownership will inhibit the flow of population from agriculture to industry and services. In fact, in many countries--Latin America as an example are worried by the excess migration of population from rural areas to the cities and land redistribution schemes are intended precisely to provide better working opportunities. Chapter VI, described some of the ways in which agrarian reform can contribute to provide better employment opportunities in farming. The effect of increased rural income on industrialization and the expansion of demand for agricultural products, particularly those that require labor intensive methods (animal husbandry, market gardening, etc), tends to create more employment in farming. Agrarian reform can have a positive effect on the labor supply.

Finally, agrarian reform measures in general, can contribute to the solution of the population problem-namely the reduction of birth rates. In areas of high population pressure, reform might create the favorable environment in which group acceptance of family planning programs can be encouraged and transfer into action.

PART II.

THE CASE OF HONDURAS

CHAPTER VIII

GENERAL FRAMEWORK OF HONDURAS

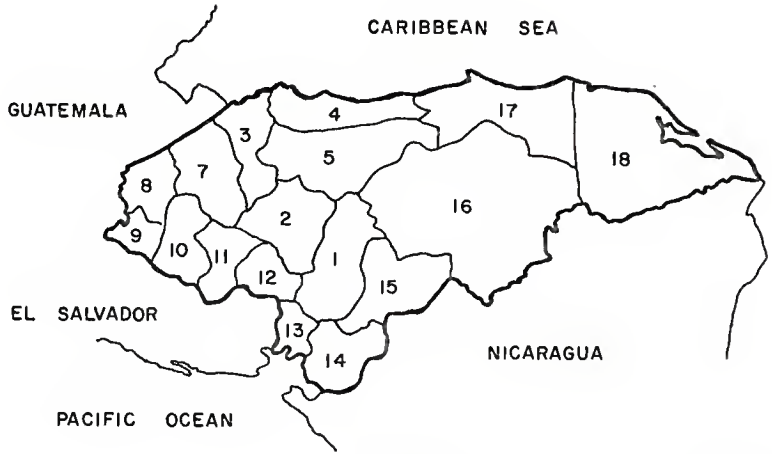
Regions and Natural Resources

The Republic of Honduras, with an area of 43,277 square miles (11,208,800 hectares), is located between 13° and 16° north latitude and 89° and 85° west longitude, on the Central American Isthmus. The country borders to the north and northwest, the Caribbean Sea and the Republic of Guatemala, to the south and southwest, the Pacific Ocean and the Republic of El Salvador, and to the east and southeast, the Republic of Nicaragua. Honduras is composed of 18 Departments which are shown on Figure 1. The nation's capital is Tegucigalpa with a population of about 221,800; other important cities are San Pedro Sula with 96,306, La Ceiba with 32,781 and Choluteca with 15,862.

The geography of Honduras is characterized by factors that are favorable for human life and activities, but there are some adverse factors that need to be overcome. Among the positive ones, is its mild and varied climate suitable for human life and for a diverse agricultural production. Its main obstacle is the rugged physiography of the territory that raises difficulties for the transport of people and goods.

The factors that influence the climate most are the geographic position and the topography of the country. The geographic position of Honduras, places the country within the tropical zone although it is sufficiently north of the Equator to be subjected to the cold fronts coming down from the temperate zone. At the same time, Honduras is subject to the tropical winds that affect it in the rainy season and move to the south in the dry season.

The territory of Honduras constitues a narrow stretch of land between



CENTRAL
1. Francisco Morazan
2. Comayagua

NORTH
3. Cortes
4. Atlantida
5. Yoro
6. Islas de la Bahia (Not shown)

WEST
7. Santa Barbara
8. Copan
9. Ocotepeque
10. Lempira
11. Intibuca
12. La Paz

SOUTH
13. Valle
14. Choluteca

EAST
15. El Paraiso
16. Olancho
17. Colon
18. Gracias a Dios

Fig. 1. - Political Division of Honduras

the Caribbean Sea and the Pacific Ocean in the route of the trade winds that blow from the northwest to the southeast. The proximity of these two great masses of warm water, does not permit large fluctuations in temperature during the year and produces a generally humid climate in the major part of the country. During the dry season, as the tropical currents move south, the trade winds bring less humidity and blow harder over the whole territory becoming hotter when they reach the Pacific Ocean bringing drought to many areas.

According to its latitude, Honduras should have a more tropical, and humid climate than it really has. But the latitude factor is strongly modified by the topography. The mountains altitude (55 percent of the territory is 600 meters above sea level) is more than 2,500 meters above sea level, and their tendency to run from east to west affects considerably the rain fall.

Such geographic elevations produce in the eastern part of Honduras, from the north coast to the middle part of the country, a humid climate. The greater proximity of the mountains to the coast in the central and western parts, reduces the humid climate in these regions to only one-third of the territory. On the other hand, the east to west course of the mountains is in the route of the trade winds which bring rain shadow (drought) in the interior valleys and south of the country.

The mean temperature of the hottest month is 78°F/25°C (May) and the mean temperature of the coolest month is 68°F/20°C (January). The absolute maximum is 98°F/37°C and the absolute minimum, 45°F/7°C. The wettest month is June, 21.3 inches/451 mm and the driest February, 0.3 inches/8 mm. The annual average reainfall is 63.8 inches/1,621 mm.

Table I gives a brief description of the climates of Honduras, which range from tropical to sub-tropical, from dry to humid.

Of the total area, 11,208,800 hectares; 1,681,300 hectares are suitable

T A B L E I

HONDURAS: ECOLOGICAL FORMATIONS, AREAS AND PERCENTAGES

Ecological Formation	A r e a	
	Hectares	Percentage
Sub-Tropical Humid Forest	4,058,750	35.4
Humid Tropical Forest	3,273,900	29.0
Dry Tropical Forest	1,722,800	15.2
Very Humid-Sub-Tropical Forest	1,607,850	14.1
Humid Mountainous Forest	298,150	2.6
Very Humid Mountainous Forest	243,300	2.1
Dry Sub-Tropical Forest	170,900	1.5
Very Dry Sub-Tropical Forest	34,750	0.003
T O T A L	11,410,400	100.0

SOURCE: Informe Oficial de la Mision 105 de Asistencia Directa a Honduras sobre Reforma Agraria y Desarrollo Agricola, OEA, Washington, D.C., 1963.

for farming or 15 percent of the total area; 16 percent for livestock raising; for forest 5,819,800 hectares or 52 percent of the territory, and the rest is composed of hills, lakes, lagoons, cities, islands, etc.

The physiography of Honduras permits a variety of climates and enables a diverse agricultural production which could not be possible with the tropipical geographic position of the country. However, the above statistics show that the availability of land for agricultural purposes is limited which places Honduras in a disadvantage with countries of similar or about the same area. Furthermore, it poses great problems of internal transportation and communication for a vast protion of the country; for the economical use of forestal resources, and the accesibility of potential unused agriculture lands of the Honduras' eastern tip.

In Honduras there are five principal regions (See Figure 2):

1) Northwestern region. It comprises most of the north coast and the western part of Honduras bordering Guatemala. It extends from the Department of Copan to the Aguan Valley in northwestern Colon. The area is generally flat with hills not higher than 1,500 meters; the rainfall varies from as low as 600 mm. to more than 4,000 mm.; the climate is generally sub-tropical humid to dry tropical, but in certain areas is very humid and tropical (Aguan Valley, Atlantida); the mean temperature is well above 24°C. It has more alluvial soils than any other region in Honduras though it shows a variety of other soils. The fertility of the soil makes it one of the best regions for intensive agriculture and livestock production in the country. About 45 percent of the land available is good for those purposes. Most of Honduras banana production for export is concentrated in this region as well as most of the established industries.

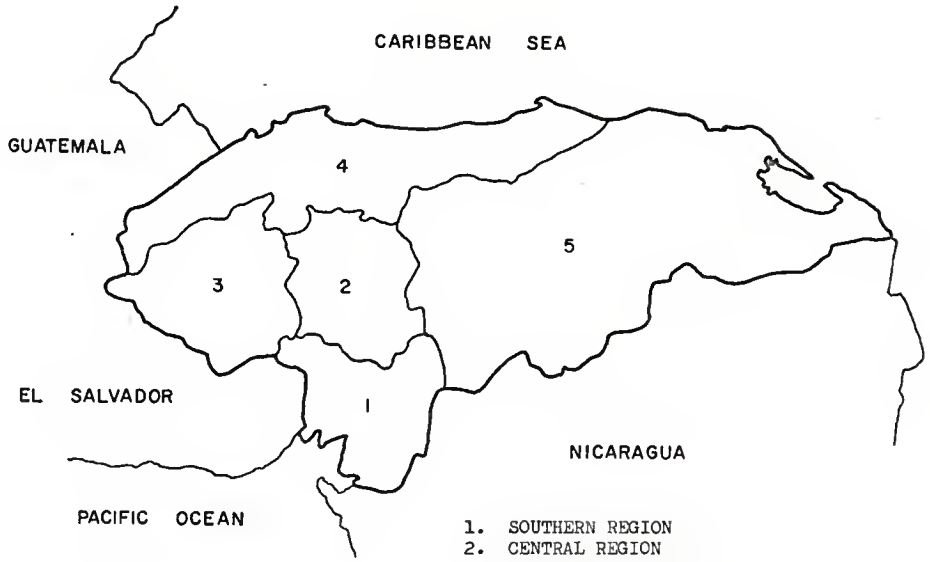


Fig. 2. - Natural Regions of Honduras

2) Southern region. The northern part of the region possesses a humid sub-tropical climate with good possibilities for producing sub-tropical products and citrics (oranges--Valencia, Washington Navel, etc). There are problems of soil management and irrigation since erosion is widespread and rain is less than 2,000 mm. a year. Temperature ranges between 16°C. and 24°C. The southern part is usually tropical dry, with a similar precipitation but hotter (more than 24°C). It has a good potential for agricultural and livestock production with better soil management and irrigation. Of the total area, about 23 percent is good for agriculture and livestock raising.

3) Southwestern region. Most of the climate of this region is humid--sub-tropical, and temperate. It is very mountainous with the highest mountain peaks in the country. The average annual rainfall in the temperate zone is only 1,620 mm.; the medium temperature 17°C., and 90% of the terrain bas more than 40 degree slopes. In agricultural terms, is the poorest region (15% of the area is suitable for agriculture), with volcanic soils of low fertility. However, in some parts of the temperate and low lands zones, there are small fertile valleys. The temperate zone is especially suitable for fruits, flowers, and vegetables proper of that zone as well as milk production. These potentialities have not been exploited at all.

4) Central region. The capital of Honduras, Tegucigalpa, is located here. It is a very homogeneous region since tbe predominant climate is tbe sub-tropical humid one. The temperature ranges from 16°C. to 24°C. and the average rainfall is 1,250 mm. Elevations go as high as 1,500 meters with slopes of more than 40 degrees. There are good possibilities for intensive agriculture in the interior valleys (Comayagua, Talanga, Sulaco, etc.) with supplementary irrigation. Forests are abundant since only 20 percent of the land is suitable for agriculture.

5) Eastern region. In comprises most of the territory of Honduras and posses the largest forestal reserves (50 percent), and the largest portion of virgin land in the country. It also has a variety of climates ranging from sub-tropical, very humid in the higher elevations to hot humid tropical in the low lands of the zone known--as, La Mosquitia. The region has developed very little because of lack of population and access roads. In the next decades, it promises to be the region of greatest potential for forest and agricultural production.[39]

Human Resources

Total Population and Rate of Growth. The population of Honduras is growing rapidly. Between 1950 and 1961, the total population increased from 1,368,650 inhabitants to 1,883,847, equivalent to a 37.6 percent increase in ten years, or a cumulative annual rate of growth of 3.1 percent. This rate of growth has increased to 3.5 percent between 1961-1967, reaching the total population of 2,455,000 inhabitants in 1967. On this basis, by 1980 the population would reach 3,771,000. This high rate of population growth poses for Honduras the necessity of promoting and achieving a very high sustained rate of economic growth in order to increase income per capita and the standard of living of its people.

The population growth observed in the past 10 years is largely due to a decrease in mortality rates (8.6 in 1965 as compared to 16.0 in 1959-60), rather than to an increase in birth rates.

Rural and Urban population. Honduras is predominantly a rural country. The last Census, taken in 1961, showed that about 75 percent of the population

[39]The classification of natural regions and resources was gathered from: Organizacion de Estados Americanos, Informe Oficial de la Mision 105 de Asistencia Tecnica Directa a Honduras sobre Reforma Agraria y Desarrollo Agricola (Washington, D.C., 1963), pp. 8-26; pp. 127-177. Any modification is mine.

lived in rural areas. Yet the rural population is growing less than the urban one.

In fact, the data available from the 1951 and 1961 Population Census show that, the urban and rural population in 1961 amounted to 538,135 and 1,345,345 inhabitants respectively. In 1950 the figures were 340,118 and 1,028,487 respectively. Thus between 1950 and 1961, the urban population rose by 198,017 inhabitants representing an increase of 58.2 percent. Meanwhile, in the same period, the rural population increased by 316,858 inhabitants which is equal to a 30.8 percent increase. Nevertheless, the increase in urban population was not a general phenomena and was restricted mainly to the capital city of Tegucigalpa and the second largest city, San Pedro Sula. Without these two cities, the urban growth would be reduced to 29.3 percent.[40]

The large growth of these two cities (49.7%) reflects the expansion and the creation there of industries as well as services during the period 1950-1961. There are no figures for 1961-67 and the amount of migration for the other years. Even though Honduras at the present time does not suffer from an alarming exodus of rural people to the cities, it is liable to do so as long as population continues to grow fast and resources in agriculture remain poorly utilized. The topic will be treated later on.

Characteristics of the Population. Honduras has a very young population. The 1961 census showed 58 percent of the population to be under 20 years of age and 48 percent less than 15 years of age. Children under 10 years of age comprised 35.5 percent of the total population. (See Table II).

The age structure just described has many implications for social and economic development. First, the high proportion of children that do not

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[40] Ibid., pp. 28-29.

TABLE II

HONDURAS: AGE DISTRIBUTION OF THE POPULATION, 1961

Age Group	Number	Percentage
Total Population	1,866,420	100.0
Less than 1 year	76,920	4.12
From 1 to 4 years	277,240	14.84
From 5 to 9 years	308,620	16.56
From 10 to 14 years	233,940	12.52
From 15 to 19 years	184,280	9.86
From 20 to 24 years	152,560	8.16
From 25 to 29 years	127,600	6.83
From 30 to 34 years	108.940	5.83
From 35 to 39 years	94,880	5.08
From 40 to 44 years	72,280	3.86
From 45 to 49 years	61,380	3.29
From 50 to 54 years	50,200	2.68
From 55 to 59 years	33,680	1.80
From 60 to 64 years	34,760	1.86
From 65 to 69 years	19,020	1.02
From 70 to 74 years	13,060	0.69
From 75 and more	17,060	0.90

SOURCE: Adapted from Informe Oficial de la Mision 105 de Asistencia Directa a Honduras sobre Reforma Agraria y Desarrollo Agricola, OEA, Washington, D.C., 1963

produce and depend on the working population for their subsistence places a a great burden on the latter. Second, the short life expectancy of the population (life expectancy is 49 years) diminishes the proportion of people in the working ages concidering that only 33 percent of the population is between 20 and 49 years of age. Third, the high children base of the population will probably mean in the future a still higher rate of population growth as they reach the age of procreation which is highly possible since Honduras had the second lowest infant mortality rate in Latin America, 41.2 per 1000 in 1965. Fourth, a high proportion of children represents an increase in the cost of educational services.

Yet, the greater investment that a large young population requires, is beneficial, in the sense, that for a developing country, a well educated population represents one of the basic resources upon which its future socio-economic development depends. In addition, health services could be directed to benefit the present and future adult population in order to prolong life expectancy thereby enlarging the relative size of the Honduras labor force. Nevertheless, the country still faces the disadvantages of a high proportion of dependents to actively engaged population since it requires larger increases in per capita income than would otherwise.

Another important characteristic is the ethnic composition of the population. The population of Honduras has a great racial homogeneity. In 1959, 86 percent of the population was considered mestizo (mixed),[41] 10 percent American Indian, 2 percent white and 2 percent black. Foreign born were only 2.4 percent of the total population.

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[41]By mestizo is meant any mixture of the white, American Indian and black races.

Distribution and Population Density. Under this heading two things would be discussed briefly, density and population distribution for the whole nation and rural areas.

In 1950, the average density was 12 persons per square kilometer, increasing to 17 in 1961, and still further to 22 in 1967. This, of course, reflects the high rate of population growth during the last 17 years.

The population of Honduras is concentrated in the northwestern-southwestern regions, where 52 percent of the population lives and occupies an area of 31 percent of the total territory. On the other hand, only about 1 percent of the total population lives in the eastern region, the largest in area (50% of the country). The central and southern regions are in between since they comprise about 38 percent of the total population and 20 percent of the total territory.

The population of Honduras is located mostly in the plateaus and high elevation valleys, prefering cooler and drier climate from the hot and humid climate of the coasts. Yet there are very important population centers in the northern coast like San Pedro Sula, La Ceiba and Puerto Cortes.

The average land/man[42] ratio in Honduras was 1.5 hectares per rural persons in 1961. Only the northwestern region had a ratio higher than the national average (1.6). The southwestern region was equal to the national average (1.5), the southern (1.4), the central (1.3), and the eastern region (1.2) well below the national average. It must be pointed out that the regions falling on the average or below, had about 70 percent of the farm area.

On the other hand, if the ratio of land potentially suitable for agricultural purposes is used, the picture changes somewhat. For example, the

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[42]Land includes: the area in farms under crops, pastures and fallow.

ratio of agricultural land per rural person is 2.4 for the northwestern region which has 30 percent of the total agricultural land, and 66 hectares of agricultural land/rural person for the eastern region which holds 40 percent of the country's agricultural land. The ratio, however, is very low for the southwestern region (0.6) where 25 percent of the rural population lives and also for the southern region (1.1) which holds 24 percent of the rural people. The central region with only 14 percent of the whole rural population has 1.8 hectares of potential agricultural land per rural person just below the national average (2.0).

The above figures show that rural population in Honduras is concentrated in areas where the potential agricultural land is scarce. About 63 percent live in areas with less than 2.0 hectares of agricultural land per rural person. In contrast, only 37 percent are located in areas well-endowed with agricultural resources.

Agricultural Labor Force. Preliminary statistics of the Consejo Superior de Planificacion Economica, show, that the actively engaged population in agriculture was 66 percent in 1966. The same source estimated that in 1961, this figure was 70 percent or 397,700 workers. In 1950, the active population in agriculture represented 83 percent of the total working force.

As it is the case with total population, the agricultural working force of Honduras is very young. According to the 1961 Population Census, 71.7 percent of the working force was under 40 years of age (284,700 persons). Of this total, only 34.2 percent were family masters. In the groups older than 40 years of age, 80.7 percent were family masters (112,260 persons).

The agricultural labor force of Honduras was composed of 276,596 self-employed workers (70%) and 126,115 wage earners (30%). Thus, about three-fourths

of the labor force was of family-type. Wage-earner workers were predominant in three Departments; Cortes, Atlantida and Yoro, where the banana plantations are located. In the rest of the country, the proportion of self-employed workers varies from 84 to 54 percent.

Social Conditions. Under this heading three things are discussed briefly: (1) education, (2) health and housing conditions, (3) social mobility.

Education. The 1950 Population Census showed an illiteracy rate for persons 15 years of age and older of about 64 percent--44 percent for the urban population and 75 percent for the rural population. Ten years later, the 1961 Census showed an illiteracy rate of 55 percent--26 percent for the urban population and 65 percent for the rural population--and only 48 percent of the primary, or the seven to 15 year age group, enrolled in school. The Census showed also that one student in ten entering primary school completed the sixth grade, even fewer went to secondary school, and more than half of primary school pupils did not go beyond the third grade. While 17 percent of the students entering first grade completed the sixth[43] grade in urban areas (1956-58), none did so in rural areas, and only 11 percent finished third grade.

The situation is more serious for the agricultural sector of Honduras if the educational level of the working force is considered. According to the same Census, of the total labor force that had not recieved any education, 80 percent was working in agriculture. This not only represents a tremendous obstacle to the future development of Honduras' agriculture, but it places the agricultural working force in a real disadvantage with other occupations in other sectors of the economy.

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[43] Primary education in Honduras is only six grades.

Health and Housing. The health and housing conditions in Honduras are still relatively poor although much progress has been made. In 1961, 75 percent of all housing units had no running water, and the percentages were almost 95 percent among rural units. Eighty percent lacked any sort of sewerage disposal facilities, 80 percent lacked baths and 85 percent were without electricity; the percentages are presumably higher in rural areas. The Census indicated that hospital beds (540 persons per hospital bed), doctors (8,900 persons per physician), nurses and facilities for outpatient care were well below 50 pe cent of accepted norms. The situation in rural areas was even worse, because of the heavy concentration of medical services in the two major cities. As an example, a survey carried out in a rural area in southern Honduras, showed that intestinal parasitism, dysentery, diarrhea, and malaria constituted about 60 percent of the diseases suffered by the rural population --resulting from lack of sanitary facilities in particular running water.[44]

The building material for most of rural housing is lath and mud (bahareque) for walls, with one room and earth floors. The survey is fairly representative of housing conditions in the northwestern and southern regions of Honduras were about 40 percent of the rural population lives.

Social Mobility. Probably as a consequence of its great racial homogeneity, the social structure in Honduras does notshow a very rigid stratification. According to a recent study, social mobility as such is relatively high. Nevertheless, there are great differences among the population that are reflected in the living standard and way of life; cultural and educational levels, and even due to geographical differences. Yet, such differentiation

[44]Information: Inter-American Development Bank, Socio-Economic Progress in Latin America (Washington DC, 1967), 198-200; Organizacion de Estados Americanos, Informe Oficial de la Mision 105 de Asistencia Tecnica Directa a Honduras sobre Reforma Agraria y Desarrollo Agricola (Washington DC, 1963), pp. 39-43.

is not the product of racial differences, religious believes or of an aristocratic tradition, but is due basically to income and education levels. When such barriers exist they constitute a serious obstacle to economic development.

Notwithstanding social differences are lesser in Honduras than in other countries in Latin America, rural society is composed of two very differentiated classes: the upper high income population and the low income groups. This is essentially the result of concentration of land ownership, but at the same time a strong middle class is beginning to emerge. Since the barriers are mainly of an economic-institutional and educational nature, the possibilities for greater social vertical mobility are good if certain institutions of land tenure are modified.

Horizontal mobility has been hampered because of the very little economic progress in the past, but as better economic opportunities are created it should help in alleviating this difficult problem. Education at the vocational and intermediate levels should play a very important role in this respect.

Geographical mobility has been shackled in Honduras because of the lack of good transportation and communication facilities, and the absence of economic stimulus for better employment opportunities. To illustrate this point, the 1950 Census showed that the percentage of residents living in provinces other than their own, was only 8.8 percent of total population. This does not compare favorably with Costa Rica (34.0), Chile (24.6), Venezuela (18.0) and Argentina (16.7).

CHAPTER IX

ECONOMIC SITUATION

Economic Development Trends

The economy of Honduras, as the rest of the Central American countries, essentially depends on agriculture. In 1966, the agricultural sector's share of gross domestic product was 36 percent, however, this proportion has been declining since 1950 (49.0). Agriculture employed in 1966, 66.9 percent of the total labor force as compared to 83 percent in 1950. Furthermore, agricultural exports accounted for 85.5 percent of Honduras' total exports in 1966.

During the 1950-1962 period, Honduras' gross domestic product (GDP) at 1962 constant prices rose by an average of 3.8 percent with a resulting low 0.6 percent a year increase in real per capita product. Nevertheless, between 1962-1966 gross domestic product at constant prices increased at an annual average rate of 5.3 percent with a resulting improvement of 1.8 percent a year in real per capita product. Tentative statistical data indicated that for 1967, GDP rate of growth fell to 3.5 percent.

Despite the short-run improvements of the Honduras economy, per capita product growth is still lower than the minimum target rate (2.5%) required to reach the goals set by the Charter of Punta del Este. In absolute terms, product per capita was $192 in 1950 increasing in 1966 to 224 1962 dollars, but still remained the lowest in the Central American area, which averaged in 1966 approximately 326 dollars.

The behavior of the economy in the last 17 years has been influenced by the developments in the agricultural sector. This is the result of the predominant position that agriculture has in the economy. As agriculture represents

more than one-third of gross domestic product its rate of economic growth strongly influences that of the economy.

Over the last six years, agricultural product has increased at an average annual rate of 5.9 percent which is comparable to that of the economy as a whole (5.3%). On the other hand, from 1950 to 1962, the economy grew at a rate of 3.8 percent while the agricultural sector only at 1.0 percent. The analysis is more relevant if the banana sector is considered since the Honduran agriculture is very much influenced again, by what happens in that small segment of the economy. For example, strong gains in banana output, in the latter part of the period 1962-66, accounted for much of the gains observed in that period. By the same token between 1950 and 1962, the banana product grew only at a 0.3 annual rate.

The stagnation of the agricultural sector in the 1950's was counter-balanced by the dynamic growth of the manufacturing sector. The gross industrial product in the period 1950-62 grew at a rate of 7.5 per year, maintaining that same rate of growth to 1966. Industrialization has proceeded very fast considering that the degree of industrialization[45] has increased from 7.1 percent in 1945 to 14.7 percent in 1966. Nevertheless, according to the 1965-69 Industrial Development Program, 50 percent of the labor force in the industrial sector was employed in artisan type activities, that is, firms that employ less than 5 workers. Industrial output expansion was concentrated on light and intermediate consumer good industries which accounted for 85.7 percent of the gross value of industrial output (1962).

Despite its growth in recent years, manufacturing in Honduras is still the least developed in Central America, because of the limited domestic market

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[45] The degree of industrialization is measured by dividing the industrial product over the GDP at factor cost.

and lack of economic and social infraestructure. The Central American Economic Integration Program offers good possibilities for increasing industrialization in Honduras. Various regional projects promise to have an important impact on the country's production structure, especially in processing forest products, for which an investment of about 73 million dollars in a pulp and paper plant is proposed. Forest reserves cover about 52 percent of Honduras and are a large potential resource for export expansion and diversification.

The country is seriously deficient in transportation facilities. In 1965 there were 3,600 kilometers of roads, of which only 400 kilometers were paved. In absolute terms, and in relation to the total area, the road system is the smallest in Central America. However, Honduras authorities have a large investment program which has as it principal goals: the improvement of the basic road network, build access roads in the central and eastern part of the country, and complete construction of several integration highways.

In addition to insufficient transportation facilities, the country is short of adequate sources of energy. In 1965, the total installed capacity was 69,600 KW while in Central America (except for Guatemala) the average installed capacity was 70,000 KW in 1958. Per capita electric power production in 1966 was less than half the average for Central America. Demand has been rising rapidly, by 25 percent in 1966 alone, and is straining installed capacity. As is the case with transportation facilities, the government of Honduras has channeled a great part of its investment to improve the country's generating capacity. The Government has planned an investment of 18 million dollars in the second phase of the Yojoa-Rio Lindo project to develop 40 mega-watts of additional hydroelectric generating capacity in the inmediate future.

One of the most dynamic growth factors of the Honduran economy during 1962-66, was a rise in exports which averaged 15.9 percent a year, as the export value of bananas (which represented 52 percent of total exports and 59% of ag icultural exports), cotton and meat increased by 17.7, 28.5, and 10.7 percent respectively while the foreign sales of coffe doubled in value. However, with few exceptions, the growth was due to increases in the quantity exported rather than improvements in average prices. For example, banana showed a 19.0 percent growth rate in the quantity exported, but a negative average price growth rate of -1.1 percent. This is true also for cotton whose quantity increased by a yearly rate of 32.0 percent, but its price at a negative rate of -3.3 percent. The average price of coffee remained at about $0.88 cents the kilogram, and increased at only a 0.3 percent rate. Only the prices of tobacco, and beef meat showed positive rates above 1.0 percent.

In contrast to the short period 1962-66, exports grew at a rate of 1.5 percent between 1953 and 1962. The main factor being the detioration of banana exports whose rate of growth was -2.0 percent a year (1953-1960), not compensated by increases in cotton and coffee exports.

During 1961-66, imports rose more rapidly (10.2%) than exports (8.8%), and doubled in value from 66 million dollars in 1961 to 134 million dollars in 1966. The largest increase was in imports of raw materials and capital goods (65% of total imports), reflecting a rapid rate of industrialization. The same trend was observed between 1953-60 when imports grew at a rate of 4.7 percent while capital goods imports at a 8.1 percent rate.

Because of the rapid rise in imports of goods, payments of freight charges and insurance, and investment services, a balance of payment surplus of 5 million dollars on current account in 1961 was converted in subsequent years into a deficit which, according to preliminary figures, reached 16.6 mil-

lion dollars in 1966.

The past five years have witnessed, "a substantial increase in the net inflow of long-term capital to the private sector. A net outflow of 7 million dollars in 1961 was replaced by a net inflow of more than 11 million dollars in 1966, earmarked chiefly for the banana plantations and industrial sector. The public sector's net foreign capital receipts increased from 1 million dollar in 1961 to 4 million dollars in 1966, according to preliminary reports. A downtrend has been observed in recent years, however, which reflects the sector's limited ability to absorb the mounting financial resources available for long-range development projects".[46]

Despite the deficits on current accounts in recent years, there was a total balance of payment surplus of 2.5 million dollars in 1966, compared to a deficit of about 2 million dollars in 1961, and the gold and foreign exchange holdings rose to about 27 million dollars at the end of 1966, compared to a low 9 million dollars in 1961. These reserves were estimated at 25 million dollars at the end of 1967.

Gross capital formation advanced from 11 percent of GDP in 1961 to 14 percent in 1966, 3 percentage points below the projected rate of the National Development Plan (1965-69) for that specific year. However, the economy attained a rate of gross capital formation of 19 percent of GDP in 1952. The entire increased was generated by private investments, as capital outlays of the public sector contracted from 20 percent of total investment in 1961 to 17 percent in 1966. This percentage is below the projected averaged share of public investment in total investment, for 1962-66, 31 percent.

The Agricultural Sector

Agriculture plays a very important role in the Honduran economy in re-

[46] Inter-American Development Bank, Socio-Economic Progress in Latin America, Washington DC, 1967), p. 165.

TABLE III

HONDURAS: TOTAL LAND USE

Description	1952 Area in Thousands of Hectares	1952 % of Total	1965-66 Area in Thousands of Hectares	1965-66 % of Total
Annual Crops	296.4	11.8	342.1	14.2
Permanent Crops	174.6	7.0	190.5	7.9
OTHERS 1/	2,036.1	81.2	1,884.7	77.9
Fallow	424.7	16.9		
Pastures	822.5	32.8	n.d.	n.d.
Forests	528.5	21.1	n.d.	n.d.
Montes	198.8	7.9	n.d.	n.d.
Others	61.6	2.5	n.d.	n.d.
TOTAL	2,507.1	100.0	2,417.3	

1/ The 1965-66 Census includes under this item: pastures, fallow, forests, montes and others.

SOURCE: Cifras Prelimianres Censo Nacional Agropecuario 1965-66, Direccion General de Estadistica, Tegucigalpa, D.C., 1967; Informe Oficial de la Mision 105 de Asistencia Tecnica a Honduras sobre Reforma Agraria y Desarrollo Agricola, OEA, Washington, D.C., 1963.

gard to employment, foreign trade and its contribution to national product. It is important now to look closely at the agriculture of Honduras per se.

Honduras has about 3.5 million hectares of land suitable for farming and livestock raising. In 1962, the farm land was approximately 2,507,404 hectares, 18.8 percent of which was dedicated to annual and permanent crops. The area under pastures was 32.8 percent. The 1965-66 Census, however, gives a smaller farm land area (2,417,360 hectares) which is probably due to some statistical errors. For that specific year, total land use had not changed significantly except for the fact that the non-farming area declined relative to 1952. (Table III).

The agriculture of Honduras is characterized by two highly differentiated sectors: (1) the export producing sector, and (2) the sector producing for the domestic market. The export producing sector is highly commercialized, employing generally advanced farming methods, usually showing high yields per unit cultivated and income. On the other hand, the non-export sector is generally backward in agricultural techniques, income is usually low and in most instances a subsistence-traditional type of agriculture prevails.

Export agriculture is concentrated on such products as bananas, coffee, cotton, tobacco and cattle. Forestal products also play a very important role. Bananas, coffee and cotton production represents more than 50 percent of the gross value of agricultural output. Table IV shows the area, production and yields for these exports crops and products.

Yields of banana production for export (32,000 Kg/Ha) in 1962 were higher than the 1965 average yields of other banana producing countries. For example, that of Ecuador was 15,700 Kg/Ha; Costa Rica 24,700 Kg/Ha and Africa 8,100 Kg/Ha. However, if the production for internal consumption is added, yields are

TABLE IV

HONDURAS: AREA, PRODUCTION AND YIELDS OF MAIN AGRICULTURAL, LIVESTOCK AND FORESTAL PRODUCTS, (1952-65)

(THOUSANDS OF UNITS)

Product	1952			1965		
	Area (Has)	Production M. T.	Yields Kgs.	Area (Has)	Production M. T.	Yields Kgs.
Corn	294.8	209.2	709	460.0	414.0	900
Rice	10.3	17.0	1,652	17.0	27.0	1,630
Bean (Frijol)	49.4	21.5	435	112.0	42.0	460
Sorghum	54.4	44.3	812	75.9	60.0	800
Bananas and Plantains 1/	63.0	722.6	11,470	65.0	850.0	13,100
Coffee 2/	71.8	14.8	206	111.0	29.3	260
Sugar Cane	24.7	618.2	25,030	27.0	675.0	25,000
Cotton	1.6	0.5	302	14.0	11.0	810
Tobacco	7.7	3.8	496	9.0	47.0	500
Cattle 3/	705.9	12.6	11.1	--.--	17.0	14.0
Wood 4/	--.--	473.1	---.---	--.--	--.--	---.---
Milk 5/	--.--	102	380	--.--	142.0	602

1/ The area cultivated by the United Fruit Co. and Standard Fruit Co. was 22,980 Has. (1950) with an exportable output of 434,400 metric tons and a yield of 18,900 Kg/Ha. In 1962, the area declined to 11,655 Has., with an exportable production of 372,540 M.T. and a yield of 32,000 Kg/Ha.

2/ Area, production and yields are for 1964.

3/ Production is expressed in metric tons of meat, yields, kilos of meat produced/head. The average carcass weight in 1963 was 131 Kgs. and live weight 278 Kgs.

4/ Production expressed in cubic meters.

5/ Yields expressed in kilograms per miling cow.

SOURCE: Programa de Desarrollo Agropecuario 1965-69, Consejo Superior de Planificacion Economica, Tegucigalpa, Octubre, 1965; Production Yearbook 1967, Vol. 21, Food and Agricultural Organization, Rome, 1968.

reduced considerably. Cotton (lint) yields are higher (810) than those of the United States (600) and the United Arab Republic (650), but lower than those of neighboring country Nicaragua (1020), producing under similar conditions (area cultivated, climate, etc). Coffee production has not increased appreciably between 1952-65 (15.5) which is reflected in the existing low yields. In contrast to bananas for export and cotton, most of the increase in production is due to an expansion of the cultivated area than per unit sown.

The production of corn, rice, beans and sorghum is destined (mostly) for internal consumption although exports of these grains to the Central American area has been increasing since 1960. Between 1960-66, the quantity of corn and beans exported grew at a rate of 16.9 and 9.8 percent respectively and their value at 21.0 and 7.9 percent. These two grains represented 97 percent of total Honduran grain exports to the Central American Common Market. Nevertheless, production has been increasing slower, or at the same rate as population with the sole exception of beans (4.4%).

On the other hand, the slow growth of output is reflected in relatively low yields. Corn, which constitutes one of the basic ingredients of the Honduran diet, had an average yield of 900 kilogram per hectar. in 1965 as compared to 709 kilograms per hectar.in 1952. The average yield of corn (1965) was considerably lower than the world's average (2,270 Kg/Ha.) and that of Latin America as a whole (1,260 Kg/Ha.). Sorghum and rice productivity has been declining also. Of the other crops, only beans surpassed a 3.0 percent yearly rate of increase in yields between 1952 and 1965.

As a consequence, the gross total supply for human consumption of corn, beans, rice and sorghum between 1962-66, rose from 6,394,400 to 6,639,600

quintals,[47] which is equivalent to a 1.3 percent rate of growth while popula- was increasing at a 3.5 percent rate (1961-67). During the same period, exports of these grains represented a large portion of total output (17%) and in one crop, beans, the exportable production was as high as 58.3 percent.

The low productivity of grain production coupled with a tremendous rise in exports brought about the need to import these same grains in order to satisfy internal consumption. This, not only represented a lost of foreign exchange earnings needed for other sectors of the economy, but it meant a higher import price. For example, the price paid for corn imports was 12 percent higher than its export price representing a lost of $250,000 in the transaction.

A recent study about the livestock situation in Honduras,[48] showed that internal consumption of beef meat per capita has been decreasing since 1952. At that time, the availability of meat per capita was 8.2 kilograms while in 1964 it was 5.29 kilograms. It is estimated that in 1966 it was 4.4 Kg. of beef per capita. The deteriorating situation in livestock production is the result of increasing meat exports, a high slaughtering rate, a high mortality rate and a consequent very low birth rate.

To illustrate the point, in 1952 the proportion of total beef meat production for export was only 4 percent but it was 32 percent in 1964, and about 28 percent in 1966. Between 1958-64, the volume of meat exports increased by 562%. On the other hand, the cattle herd increased from 1,146,801 to 1,221,368 heads or a yearly relative increment of 0.7 percent, the lowest in Central America. The mortality rate of less than one year calves was 22.0

[47] 1 quintal=100 lbs.

[48] Comite de Coordinacion de Desarrollo Agropecuario, Diagnostico de la Ganaderia en Honduras, (Tegucigalpa, 1966), 64-76, 131-142.

percent in 1964 while total herd birth rate was only 45 percent (the Central American average was 62%). The average slaughtering rate between 1952-64 was 12.5 percent, lower than in the USA (40%), New Zealand (39%), Australia (28%), Argentina (22%), Central America (12.5%). Yet in all these countries, mortality rates are low and birth rate are high which is not the case in Honduras.

The technology used in the agricultural sector has not changed very much in recent years except in the banana for export, cotton, sugar cane and some scattered coffee producing areas. For example, the average nitrogenous fertilizer consumption for the period 1961-65 according to FAO estimates was only 9,00 metric tons, while in El Salvador was 33,000, in Costa Rica 28,000, and in Nicaragua 97,000 metric tons. The 1962-63 figures for commercial phosphates (P_2O_5) and Potash (K_2O) were 300 and 100 metric tons, while for Latin America phosphate consumption was 523,900 metric tons. However, it must be stressed that nitrogenous fertilizer consumption was only 400 metric tons in the period 1952-57. According to these figures, between 1961-66, the fertilizer consumption per hectare (farmland) was 6.7 Kg/Ha. in Honduras which was lower than the world average in 1959-60, and that of the Latin American countries: Brazil (9.0 in 1962-64), Chile (29.4 in 1964), Mexico (24 in 1964) and Venezuela (22 in 1964).

The amount of tractors in use has increased from 283 units in 1952 to 395 in 1965. The ratio of tractors per hectare of farmland is 0.0003, but it is not a very meaningful indicator since a large portion of Honduras' farmland is not suitable for mechanization in a large scale. However, this does not mean that mechanization is not possible.

As expected the productivity of the sector per worker is also very low.

Although agricultural product per worker does not reflect labor productivity in agriculture as such (but also that, of the stock of capital, land, etc), it is a close approximation. During 1962-66, product per worker increased at a rate of 2.9 percent, moving from 373 dollars per worker in 1962 to 450 in 1966. However, it is the lowest in the economy and was far below the national average in 1966 (767). The indicator does not necessarily reflect the real situation in agriculture because just the banana sector had in 1962 an output per man of 6,600 dollars and the rest of agriculture 315. The low productivity of agriculture is also reflected in very low income per capita. In 1961, average real agreicultural income per capita was $197 as compared to the national average of $252, though the relationship between agricultural and non-agricultural income (1.83) is not as large as in other Latin American countries.

In addition to these problems the country is deficient in technical agricultural education. There are only two agricultural schools at the vocational level: The Pan American School of Agriculture (Escuela Agricola Panamericana) and the Catacamas Demonstrative School (Granja Demostrativa de Catacamas). At the present time there is not a School of Agriculture or Veterinary Medicine at the university level. A forestry school at the vocational level will be established soon.

One of the limiting factors of the Honduran agriculture is the lack of sufficient agricultural technicians. In 1962, there were 50 professionals in agriculture and 84 professionals not trained at the university level (peritos), for a total of 143. In 1962, there was 1 agricultural technician, with or without university education, for 2,800 people engaged in agriculture.

There were 19 extension agencies and 21 extension agents in 1965. The

T A B L E V

INDEX OF FOOD PRODUCTION, AGRICULTURAL PRODUCTION, PER CAPITA FOOD AND TOTAL AGRICULTURAL PRODUCTION, (1952-1965)

(1952-56=100)

	1952-56	1961	1965
Index of Food Production			
World	94	123	133
Latin America	92	122	133
Honduras 1/	101	126	148
Index of Total Agricultural Production			
World	94	121	133
Latin America	93	127	141
Honduras 1/	99	125	157
Index of per Capita Food Production			
World	97	107	108
Developed Regions 2/	97	110	115
Underdeveloped Regions 3/	96	106	105
Latin America	97	101	101
Honduras 1/	107	102	105
Index of per Capita Total Agricultural Production			
World	97	106	107
Developed Regions 2/	97	109	114
Underdeveloped Regions 3/	96	107	106
Latin America	99	105	103
Honduras 1/	105	101	112
Index of Population			
World	96	114	124
Developed Regions 2/	99	106	110
Underdeveloped Regions 3/	97	110	115
Latin America	95	121	136
Honduras 1/	94	124	143

1/ Refers only to 1952

2/ Includes Western Europe, Eastern Europe, USSR, North America, Oceania, Argentina, and Uruguay.

3/ Includes Latin America, Near East, Far East (Exc. Mainland China), Africa.

SOURCE: Production Yearbook, 1967 Vol. 21, Food and Agricultural Organization, Rome, 1968.

ratio of farmers to extension agents was about 9,300. The extension service has not been able to benefit a large portion of farmers because of limited funds and lack of well trained-personnel. Of the total budget appropiation to tbe Ministry of Natural Resources, only 14 percent was granted to DESARRURAL, the bureau in charge of extension services. The approximate cost per farmer benefited was $3.20.. Research in agriculture has been concentrated on the introduction of new varieties (corn) and plague control in co-operative projects with farmers. Livestock research has consisted in introducing new cattle breeds (Brahman, Brown-Swiss, Santa Gertrudis) and improving hog and poultry production methods. The Ministry of Natural Resources has four experimental stations, the National Institute one, and the United Fruit Company and the Pan American School another two.

It is estimated that agricultural credit doesnot benefit two-thirds of the Honduran farmers. Institutionalized credit (Banco Nacional de Fomento) has a program for the small farmer, and the amount of credit granted between 1960-1965 increased from 5.4 to 22.3 million dollars. However, only 3.5% of credits ranging from $1,250 to 1,500 to small farmers were granted. In 1963, the official credit institution started a liberal credit program but only 20% was channeled to production for internal consumption and the amount loaned was only 35.1%.

Despite the fact that the indixes of total agricultural and food production have been increasing in relation to 1952 (See Table V), in per capita terms they have been falling. The index of per capita food production was 105 (1952-56=100) in 1965 while that of agricultural output was 112 in the same year. FAO estimates that, between 1952-53 and 1963-64, the net agricultural output grew at only 3.2 percent a year about the same rate as population

(3.1%). Furthermore, USDA indexes of per capita agricultural and food production (1957-59=100) indicate that agricultural output per capita fell below the 1957 level in 1966 (99) rising slightly in 1967 (105) but still below the 1965 index (108). On the other hand, food per capita production has been declining since 1965 when the index was 104 (1957-59=100) and in 1967, 103.[49]

Nutritional Levels

The national diet does not have much variety as the basic diet of the population consists mainly of frijol (beans), corn, rice, bananas and plantains. Meat, fish, and vegetable consumption was one of the lowest noted in the Western Hemisphere in 1962.

The best way to analyze the disparities existing in the food supply per capita consists in expressing them in relation to the nutritional value of the diet. There are two aspects involved here: the quantitative and the qualitative one. The quantitative aspect is measured by the caloric intake of the diet in which the equilibrium of different nutrients needs must be considered. On the other hand, the nutritive quality of the diet is measured by the protein content (especially animal protein) and the total percentage of calories derived from cereals, starchy and roots foods and sugars.

Recent studies by FAO and the Instituto de Nutricion de Centro America y Panama (INCAP) showed that the population of Honduras was undernourished (getting too few calories to maintain normal activities or body weight for adults and for children a deficient physical development) and malnourished (insufficiency in the nutritive quality of the diet due to lack of proteins,

[49]U.S. Department of Agriculture, Economic Research Service, The Western Hemisphere Agricultural Situation, (Washington D.C., 1968), 29.

shortage of critical amino-acides, and insufficient vitamins and minerals). Malnourishment results in incomplete body development and lack of resistance to disease.

The calorie intake per day in Honduras was estimated to be 2,070; 20 percent below the minimum of 2,600 calories required by FAO. It was considerably lower than the world average calories intake (2,400 in 1957-59) and that of Latin America (2,400 ca/day). Preliminary figures, estimated the 1965 intake to be 1,963 calories/day for rural areas and 1,740 calories/day for urban areas. FAO short term goal for improving calorie intake for 1975, in low calorie consumption countries, is 2,350 ca/day.[50] Honduras, then, if far behind in an improvement of its people's nutritional levels.

In qualitative terms the Honduran diet is also insufficient. In a study made by Telma H. Caputti of FAO,[51] in 1962, indicated that 78.3 percent of the calorie intake was derived from cereals (mainly corn), starchy foods and sugars, 9.1 percent from proteins and 12.6 percent from fats. The daily per capita consumption of protein is 57 grams of which 24 percent is of animal origin. (13 grms/person). In high calorie consumption regions (North America, Argentina, Uruguay, Oceania, USSR and Europe), the percentage of calories derived from cereals, roots and sugars was 57 percent in 1957-1959 and total daily per capita consumption of protein was 90 grams (animal protein 44 grams).

The consumption pattern in 1966 showed that a large portion of the national diet consisted of bananas supplied 35.2% of the food intake (by weight), while corn supplied 20.6%, eggs 15.9% and meat only 1.3%. Frijol (beans) is

[50] Food and Agricultural Organization, "La Situacion Alimenticia Mundial", Monthly Bulletin of Economics and Statistics, XII (April, 1966), 3.

[51] Thelma H. Caputti, Estudio del Consumo Probable de Alimentos efectuado por la Poblacion de Honduras durante 1962, Consejo Nacional de Economia. (Septiembre, 1963), pp. 4-7.

the greatest source of vegetable protein.

Many of the problems related to low nutritional levels can be solved if a greater effort is made in the direction of improving farm and livestock production, improving marketing facilities and policies. Initial steps have been initiated already.

CHAPTER X

LAND TENURE STRUCTURE IN HONDURAS

Land Tenure

Among the institutional factors that influence agricultural output in Honduras, the form of land tenure is undoubtedly the most important one. The deficiencies of institutionalized agricultural credit or the marketing system, which in one way or another, affect agricultural output, are also very important factors, but the forms under which land is held, have a more negative and adverse effect.

By tenure form is meant the individual situation on a given farm. The tenure forms prevailing in the country, according to the 1952 and 1965-66 Census, were the following:

a) Owned: by which the proprietors work on the land they own as producers;

b) Ejidal: in which the ownership of the land remains in the hands of the municipality or local authorities while the use of the land is left in the hands of the producers;

c) Leasehold: (arrendatario) in which the producer works on the land owned by somebody else through the payment of rent on a yearly basis, either in cash or kind, without any relation to the amount of the crop-harvested;

d) Sharecropper: (aparceria) in which the producer works the land by paying the owner a proportion of the harvest obtained, 1/4, 1/3, or 1/2;

e) Colonato: in the case of Honduras, is a mixed form, in which the producer is simultaneously an agricultural worker and independent producer. The worker is paid in the temporary usufruct of a parcel of land, and, in cash, by working on the landowner estate. It is a sort of work contract;

TABLE VI

HONDURAS: NUMBER, AREA AND AVERAGE SIZE OF FARMS, ACCORDING TO FORM OF TENURE, 1952-1965-66

Form of Tenure	1965-66					1952				
	N° Farms	%	Area	%	Average Size	N° Farms	%	Area	%	Average Size
All Forms	178,361	100.0	2,406,694	100.0	13.5	156,135	100.0	2,507,404	100.0	16.0
Owned	39,991	22.5	1,102,163	45.8	27.6	33,289	21.3	1,158,964	46.2	34.8
Ejidal	44,123	25.0	367,091	15.2	8.3	52,947	33.9	616,871	24.6	11.7
Leasehold	40,053	22.6	122,233	5.1	3.0	13,473	8.6	77,544	3.1	5.8
National 1/	20,089	11.5	240,950	10.3	12.4	---.---	--.--	---.---	--.--	--.--
Occupier	4,308	2.4	29,985	1.2	6.9	17,143	11.0	133,561	5.3	7.8
Other	78,438	16.0	547,651	22.4	19.5	26,668	17.0	494,909	19.7	18.6
Sharecropper 2/	---.---	--.--	---.---	--.--	--.--	6,192	4.0	12,301	0.5	2.0
Colonato 2/	---.---	--.--	---.---	--.--	--.--	6,423	4.1	13,596	0.5	1.9

1/ In 1952 Census there is no classification of national land as such, but it is probably included in land held by occupants, ejidatarios, and other forms.

2/ Not classified in 1965-66 Census.

SOURCE: Cifras Preliminares Segundo Censo Nacional Agropecuario 1965-66, Direccion General de Estadistica y Censos, Tegucigalpa, 1967; Diagnostico de la Ganaderia de Honduras, Comite de Coordinacion de Desarrollo Agropecuario, Tegucigalpa, 1966.

f) Occupier: (ocupante) in which the producer works on his own, land without a legal title;

g) National: in which the ownership of the land is in the hands of the government.

A glance at Table VI will show the number of farms and area according to different forms of tenure as well as their respective percentages. The analysis will be concentrated mainly on land held under just one form of tenure.

In the first place, the most important form of tenure in relation to the number of farms is the ejidal one. According to the 1952 Census figures, there were 52,947 farm units in the country equivalent to 33.9 percent of the total number of farms, and occupied an area of 616,871 hectares (24.6% of total area). The average size of all farm units was 11.7 hectares. By 1965-66, their number has been reduced to 44,123 units (25% of total farms) with a total area of 367,091 hectares. The average size was 8.3 hectares.

The change observed between 1952 and 1965-66, is due to the following reasons: (1) it is possible that the 1952 Census overvalued the number and area of ejidal farms since many ejidal land grantees, instead of working it directly, leased it to other farmers, and (2) Article 32, of the Agrarian Reform Law, specifies that the National Agrarian Institute is to require the inmediate restitution of ejidal (community) lands if held by private persons either unlawfully or without performance of the conditions on which it was conceded, hence, probably some former ejidal lands were included under national lands in the 1965-66 Census.

Out of the total number of farms in Honduras in 1952 (156,135), 33,289 were worked by producers-owners (21.3%). The situation has change very little

since then. However, the average size of owned farms has diminished from 16.0 hectares in 1952 to 13.5 hectares in 1965-66, reflecting the excessive fragmentation of farms due to an increase in the number of rural families.

In 1952, the number of leaseholds constituted about 8.6 percent of total farm units in the country with an area of 77,544 hectares (3.1 percent of total area). Other forms of tenancy, like sharecroppers and colonato, represented together 8 percent of the total farms in the country but only held 1 percent of the total farm area. Nevertheless, in 1965, leaseholds as such, had increased to 40,053 units (22.6 percent of all farms) with an area of 122,233 hectares which, in relative terms, was slightly above the area they occupied in 1952, yet the average size decreased to 3.0 hectares. The 1965-66 Census does not show any data about sharecropping or colonato, but presumably they are included under the leasehold form.

The precarious occupiers which accounted for about 11 percent of total farms in 1952 with 5.3 percent of the total farm area, declined in their relative importance, according to the preliminary figures of the 1965-66 Census, to 2.4 and 1.2 percent of the number of farms and area respectively. However, the decline may have been caused, as was the case of ejidal lands, by the restitution of such lands to the National Agrarian Institute (become national lands); or by Article 38 of the Law, which states, any person who can give satisfactory proof that he has peacefully occupied national lands (occupiers usually settle on national lands) more than five years before the enactment of the Law shall be entitled to adjudication of such lands (becoming owned farms), or by settlements projects carried out by the government, which, either lease national lands or adjudicates absolute ownership to the beneficiaries.

T A B L E V I I

HONDURAS: AREA AND PERCENTAGES OF FARMS UNDER ONE FORM OF TENURE BY SIZE, 1952

(IN THOUSANDS OF HECTARES)

Size of Holding	Total		Owned		Ejidal		Leasehold		Sharecropper		Colonato		Occupier	
	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%
Less than 1 Ha.	9.9	0.4	1.4	0.1	2.1	0.4	2.3	3.0	1.1	9.2	12.5	100.0	2.1	11.7
1 to 4.9 Has.	192.2	7.7	32.9	2.8	64.1	10.4	17.2	22.3	8.2	67.0	1.3	10.7	9.0	52.5
5 to 9.9 Has.	201.5	8.0	44.8	3.9	85.5	13.9	5.9	7.7	1.5	12.1	8.2	65.7	2.9	17.3
10 to 19.9 Has.	259.2	10.3	70.3	6.0	111.3	18.0	5.3	6.8	0.6	5.2	1.7	13.6	1.6	9.8
20 to 49.9 Has.	417.3	16.6	144.6	12.5	152.8	24.8	7.9	10.2	0.5	4.1	1.2	10.0	1.2	6.9
50 to 99.9 Has.	265.9	10.6	114.3	9.9	74.6	12.1	5.8	7.5	0.1	1.3	--.--	--.--	0.2	1.3
100 to 199.9 Has.	207.7	8.3	107.3	9.2	38.8	6.3	4.2	5.5	0.1	1.1	--.--	--.--	0.05	0.3
200 to 499.9 Has.	244.1	9.7	153.9	13.3	27.6	4.5	5.5	7.2	--.--	--.--	--.--	--.--	0.02	0.1
500 to 999.9 Has.	193.8	7.7	134.4	11.6	10.5	1.7	9.8	12.7	--.--	--.--	--.--	--.--	--.--	--.--
1000 to 2499.9 Has.	183.9	7.3	130.8	11.3	9.3	1.5	2.4	3.1	--.--	--.--	--.--	--.--	--.--	--.--
More than 2500	331.5	13.2	224.9	19.4	39.8	6.4	10.8	13.9	--.--	--.--	--.--	--.--	--.--	--.--
T O T A L	2,507.4	100.0	1,159.6	100.0	616.8	100.0	77.5	100.0	12.3	100.0	12.5	100.0	17.1	100.0

SOURCE: Informe Oficial de la Mision 105 de Asistencia Tecnica Directa a Honduras sobre Reforma Agraria y Desarrollo Agricola, OEA, Washington, D.C., 1963.

TABLE VIII

HONDURAS: PERCENTAGE NUMBER OF FARMS BY SIZE OF HOLDING, 1952

Size of Holding	Total[1/]	Owned	Ejidal	Leasehold	Sharecropper	Colonato	Occupiers
Less than 1 Ha.	9.9	7.0	6.4	26.5	27.4	31.3	11.7
1 to 4.9 Has.	47.1	35.7	43.2	61.0	68.4	63.2	52.5
5 to 9.9 Has.	18.0	18.6	22.5	6.6	3.1	4.0	17.3
10 to 19.9 Has.	11.9	14.8	15.2	2.9	0.8	1.5	9.8
20 to 49.9 Has.	8.8	14.0	9.7	2.0	0.3	--.--	6.9
50 to 99.9 Has.	2.5	5.0	2.1	0.5	--.--	--.--	1.3
100 to 199.9 Has.	1.0	2.3	0.5	0.2	--.--	--.--	0.3
200 to 499.9 Has.	0.5	1.5	0.2	0.1	--.--	--.--	0.1
500 to 999.9 Has.	0.1	0.6	--.--	0.1	--.--	--.--	--.--
1000 to 2499.9 Has.	0.1	0.3	--.--	--.--	--.--	--.--	--.--
More than 2500	--.--	0.2	--.--	--.--	--.--	--.--	--.--

[1/] Other forms of tenure not included.

SOURCE: Informe Oficial de la Mision 105 de Asistencia Tecnica Directa a Honduras sobre Reforma Agraria y Desarrollo Agricola, OEA, Washington, D.C., 1963.

In view of the developments described above, national lands in 1965-66, amounted to 240,950 hectares or 10.3 percent of the total farm area. The actual farm area of public lands could be larger since, as in 1952, lands under mixed forms of tenure included also national lands, eg., there are combinations of owned-national land or national-ejidal lands, etc.

The forms of land tenure in Honduras have a close relationship to the size of holdings. Tables VII and VIII depict this situation.

In 1952, the tenure forms classified as: leasehold, sharecropper and colonato, were concentrated on farms under 5 hectares (87.5, 95.8 and 94.5 percent respectively). On the other hand, ejidal and owner-operated farms under 5 hectares constituted 49.5 and 42.7 percent of their respective totals. At the same time, of all the tenure forms, only owner-operated farms had units larger than 500 hectares (1.1 percent of total owned farms) and the largest number of medium size farms (between 10 and 100 has.). Occupiers had an intermediate position with 64.2 percent of farm units less than 5 hectares.

Even though owner-operated farms had the lowest and highest number, in relative terms, of very small and medium size farms, it showed the greatest concentration of land, with the sole exception of leaseholds. For example, of its total farm area, 1,159,668 hectares, 55.6 percent was in farms above 200 hectares (2.6% of total owned farms), while farms under 5 hectares, which represented 42.5 percent of total owner-operated farms, had only 2.9 percent of the area. (See Tables VII and VIII).

The most significant change observed between 1952 and 1965-66, was the increase in the number of leaseholders and the reduction in the average size of the holdings. The principal cause for this phenomena was probably the result of a subdivision of farm units produced by the excessive number of far-

T A B L E I X

HONDURAS: PERCENTAGE NUMBERS OF FARMS, ACCORDING TO FORMS OF TENURE BY REGIONS, 1952-1965-66

Region	Total		Owners		Ejidal		Leasehold		Sharecropper		Colonato		Occupiers[6]	
	1952	1965-66	1952	1965-66	1952	1965-66	1952	1965-66	1952	1965-66	1952	1965-66	1952	1965-66
North[1]	17,617	25,809	37.5	18.4	20.7	14.4	9.1	21.4	4.1	n.d.	3.6	n.d.	25.6	10.8
South[2]	17,763	22,849	36.8	36.6	24.8	13.0	15.0	33.2	5.9	n.d.	14.0	n.d.	3.3	11.4
West[3]	51,376	70,851	21.8	17.4	52.8	30.4	12.1	27.3	4.5	n.d.	4.8	n.d.	3.8	19.5
East[4]	21,978	28,171	18.9	20.5	29.3	22.8	2.2	7.9	1.4	n.d.	2.8	nd.d	45.3	10.1
Central[5]	20,733	30,681	22.9	28.5	48.0	30.8	8.5	17.2	4.9	n.d.	1.7	n.d.	5.3	16.1

1/ Includes: Cortes, Atlantida, Yoro and Islas de la Bahia.

2/ Includes: Choluteca and Valle.

3/ Includes: Copan, Intibuca, La Paz, Lempira, Ocotepeque and Santa Barbara.

4/ Includes: Colon, Gracias a Dios, Olancho and El Paraiso.

5/ Includes: Francisco Morazan and Comayagua.

6/ Definition of tenure forms on Chapter X. For 1965-66, in occupiers, mixed form of tenure are also included.

SOURCE: Cifras Preliminares Segundo Censo Nacional Agropecuario, 1965-66, Direccion General de Estadistica y Censos, Tegucigalpa, D.C., 1967; Informe Oficial de la Mision 105 de Asistencia Tecnica Directa a Honduras sobre Reforma Agraria y Desarrollo Agricola, OEA, Washington, D.C., 1963.

mers to the available land. In addition to the smallness in size, which reflects the prevalence of minifundia, land concentration ran high in 1952 (36% of the land was held by 0.1% of all farms), and tenancy contracts were usually verbal ones and for a period generally less than one year. The situation seemed worse if sharecropping and colonato was considered, since here insecurity, poverty and dependance on the owner of the land was prominent.

Table IX gives a glance at the geographical distribution of farms according to forms of tenure.

Chapter VIII indicated the fact that rural population in Honduras (63%) is concentrated in regions where agricultural land is scarce. These regions are: the southern, southwestern and central regions. In these regions, the leasehold form of tenure is the most widespread. In the southern region, the percentage of farms under sharecropping and colonato (1952) was about 20 percent, and in the southwestern region[52] they accounted for the greatest increase in leasehold farms for the country in the period under consideration.

On the other hand, occupiers were predominant in the northern and eastern regions of the country in 1952. (See Table IX). Although the number of farms classified as occupiers in the 1965-66 Census declined, most of them are included under national lands. In fact, in the northern Departments (Cortes, Atlantida and Yoro) the average percentage of land classified as national was about 32 percent and in most of the eastern Departments (Colon, Gracias a Dios, Olancho), the proportion was 50 percent. Occupiers usually migrate from the highly densely populated areas of the south, southwest and central regions, in order to settle in the low densely populated areas where agricultural land is

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[52]The western region used for land tenure analysis is similar to the natural southwestern region and the northern is equivalent to the northwestern region.

TABLE X

HONDURAS: DISTRIBUTION OF LAND BY NUMBER AND AREA OF FARMS, 1952-1965-66

Size of Holding	1952 Number of Farms	%	Area (Has)	%	1965-66 Number of Farms	%	Area (Has)	%
All Sizes	156,135	100.0	2,507,404	100.0	178,361	100.0	2,409,694	100.0
Less than 1 Ha.	15,394	9.9	9,991	0.4	26,719	14.9	18,623	.7
1 to 4.9 Has.	73,617	47,1	192,241	7.7	57,409	32.0	112,303	4.6
5 to 9.9 Has.	28,092	18.0	201,554	8.0	36,313	20.3	167,015	6.9
10 to 19.9 Has.	18,620	11.9	259,213	10.3	27,112	15.2	750,646	10.4
20 to 49.9 Has.	13,752	8.8	417,317	16.6	19,977	11.2	410,358	17.0
50 to 99.9 Has.	3,865	2.5	265,929	10.6	6,429	3.6	297,088	12.3
100 to 199.9 Has.	1,514	1.0	207,726	8.3	2,449	1.3	244,899	9.3
200 to 499.9 Has.	803	.5	244,129	9.7	1,286	.7	264,351	11.0
500 to 999.9 Has.	284	.1	193,844	7.7	398	.2	189,594	7.9
1000 to 2499.9 Has.	126	.1	133.977	7.3	196	.1	201.137	8.4
More than 2500 Has.	68		331,483	13.2	73		270,676	11.2

SOURCE: Cifras Preliminares Segundo Censo Agropecuario Nacional, 1965-66, Direccion General de Estadistica y Censos, Tegucigalpa, D.C., 1967; Informe Oficial de la Mision 105 de Asistencia Tecnica a Honduras, OEA, Washington, D.C., 1963

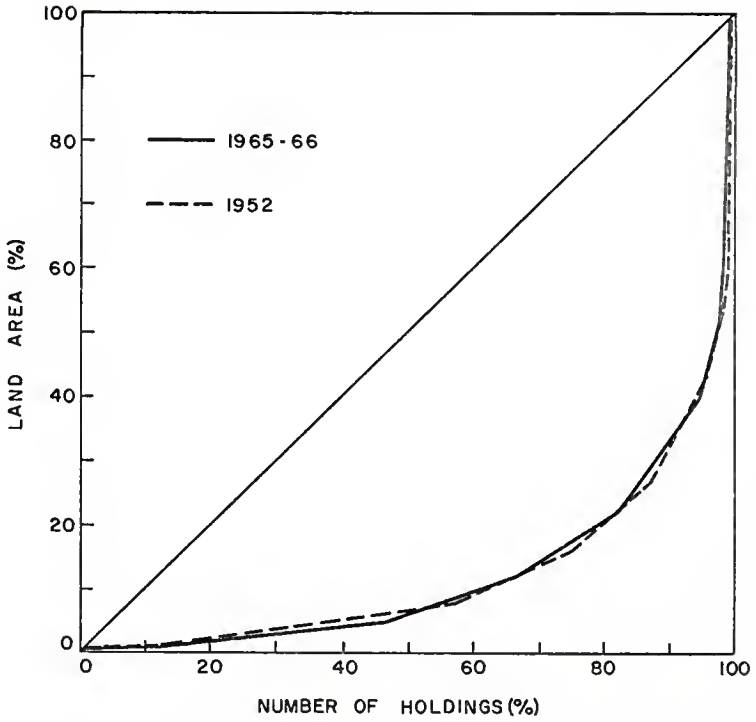

Fig. 3. - Pattern of Land Distribution in Honduras, 1952-1965-66

available. However, sometimes they migrate to areas in certain Departments (like Cortes), where land available for settlement, is already in owner-operated farms or occupied by other settlers.

Owner-operated farms are mostly predominant in the north and south, and the least in the eastern part of the country (1952). But in 1965-66, only the south remained with the highest percentage of owned farms, while the percentage in the north declined from 37.5 percent to 18.4 percent increasing, at the same time, the number of leasehold farms (21.4%). In general, however, the owned and ejidal farms constituted about 60 percent of the total number of farms in Honduras.

Size of Farms

Table X and Figure 3 show, that between 1952 and 1965-66, there has been little change in the land distribution pattern in Honduras. Nevertheless, there is a very small improvement in farms ranging from 10 hectares to 100 hectares and a deterioration in farms below 10 hectares. There is no appreciable change in farms above 100 hectares.

There is a great inequality in the distribution of land in Honduras. It is characterized by a great number of small holdings with very little land and a high concentration of farm area in few large holdings.

As may be seen from Table X, in 1952, holdings under 10 hectares were 117,103 units or 75.0 percent of the total number of farms and represented only 403,786 hectares or, in other words, 16.1 percent of the total area. The average size of holding was 3.4 hectares. By 1965-66, the number of farms had increased to 120,441 or 67.2 percent of the total but occupied an area of only 297,941 hectares (12.2% of total area), with an average size of 2.4 hectares. Thus, in fifteen years, the fragmentation and subdivision of land increased leading to even smaller farm units.

TABLE XI

HONDURAS: AREA, NUMBER AND PERCENTAGE OF FARMS, CLASSIFIED BY SIZE FOR REGIONS, 1952

(IN THOUSAND OF HECTARES AND FARMS)

Region	Total Farms	%	-1 Ha.	%	1 to 4.9 Ha.	%	5 to 9.9 Ha.	%	10 to 19.9 Ha.	%	20 to 199.9 Ha.	%	200 to 499.9 Ha.	%	More 500 Ha.	%
Northern	19.6	12.6	1.2	8.0	7.9	10.8	3.6	12.8	2.7	14.8	3.7	19.3	0.2	25.2	0.1	27.8
Southern	20.5	13.2	2.6	17.0	9.9	13.4	3.5	12.4	2.2	11.7	2.2	11.7	0.2	14.2	0.07	15.0
Western	65.4	41.8	7.0	45.6	30.1	40.9	11.3	40.3	8.3	49.2	8.3	43.3	0.2	29.0	0.1	26.5
Eastern	24.9	15.8	2.4	15.4	12.6	17.2	4.7	16.9	2.5	13.5	2.4	12.8	0.1	15.8	0.06	13.8
Central	25.7	16.5	2.2	14.1	13.1	17.7	4.9	17.6	2.9	15.8	2.5	12.9	0.1	15.8	0.08	16.9
Honduras	153.1	100.0	15.4	100.0	73.6	100.0	28.0	100.0	18.6	100.0	19.1	100.0	0.8	100.0	0.5	100.0
	Total Area															
Northern	508.6	100.0	0.8	0.4	21.4	4.2	25.8	5.1	38.6	7.5	181.8	35.7	65.2	12.8	174.9	31.4
Southern	359.8	100.0	1.7	0.2	25.4	7.1	24.8	6.9	30.1	8.3	101.7	29.6	33.4	9.2	137.6	38.2
Western	856.8	100.0	4.5	0.5	76.3	8.9	81.7	9.5	115.0	13.4	370.8	43.3	68.1	7.9	140.4	16.5
Eastern	349.7	100.0	1.5	0.5	34.3	9.8	33.9	9.7	34.7	9.9	118.1	33.8	37.5	10.7	89.6	25.6
Central	432.4	100.0	1.4	0.4	34.8	8.1	35.3	8.1	40.7	9.4	113.5	26.3	39.9	9.2	166.8	28.5
Honduras	2,507.4	100.0	9.9	0.4	192.2	7.7	201.5	8.0	259.2	10.3	890.9	35.6	244.1	9.7	709.3	28.8

SOURCE: Informe Oficial de la Mision 105 de Asistencia Tecnica Directa a Honduras sobre Reforma Agraria y Desarrollo Agricola, OEA, Washington, D.C., 1963.

TABLE XII

HONDURAS: PERCENTAGE OF FARMS ACCORDING TO SIZE, BY DEPARTMENT, 1952

Department	All Sizes	Less 1 Ha	1-4.9 Has	5-9.9 Has	10-19.9 Has	20-199.9 Has	200-499.9 Has	Above 500 Has
Honduras	100.0	9.9	47.1	18.0	12.0	12.2	0.5	0.3
Atlantida	100.0	3.3	29.0	18.7	19.0	28.6	0.9	0.5
Colon	100.0	10.7	53.8	17.2	9.4	8.3	0.4	0.2
Comayagua	100.0	6.8	50.5	18.7	12.0	11.2	0.6	0.2
Copan	100.0	18.8	46.7	12.7	10.1	11.1	0.3	0.3
Cortes	100.0	9.4	42.7	14.4	12.0	18.9	1.6	1.0
Choluteca	100.0	12.8	44.5	16.7	11.5	13.3	0.7	0.5
El Paraiso	100.0	8.7	46.8	18.4	11.6	13.3	0.8	0.4
Fco. Morazan	100.0	9.2	50.6	19.4	11.2	8.8	0.4	0.4
Intibuca	100.0	7.2	47.7	20.6	12.4	11.6	0.3	0.1
Islas de la Bahia	100.0	10.5	41.9	19.6	13.3	14.7	-.-	-.-
La Paz	100.0	6.7	46.5	20.8	14.1	11.5	0.3	0.1
Lempira	100.0	7.7	46.3	20.1	14.2	16.4	0.2	0.1
Ocotepeque	100.0	12.4	41.6	16.1	13.2	16.3	0.3	0.1
Olancho	100.0	9.9	53.5	20.5	8.8	6.9	0.3	0.1
Sta. Barbara	100.0	10.2	46.4	15.1	12.2	15.1	0.6	0.4
Valle	100.0	12.6	54.4	17.3	8.9	6.5	0.2	0.1
Yoro	100.0	4.5	43.9	21.3	13.8	15.2	0.8	0.5

SOURCE: Informe Oficial de la Mision 105 de Asistencia Tecnica Directa a Honduras sobre Reforma Agraria y Desarrollo Agricola, OEA, Washington, D.C., 1963.

At the other extreme, in 1952, 1,281 holdings above 200 hectares, or 0.7 percent of the total number of farms accounted for 953,433 hectares or 37.9 percent of the land. The average size was 750 hectares. On the other hand, in 1965-66 there were 1,953 holdings or 1.0 percent of the total number of farms with an area of 925,758 hectares or 38.5 percent of total land area. Yet, the average size decreased to 480 hectares. Since the situation has not change, the reduction in the area is due to some statistical error in the 1952 Census.

The prevalence of very small holdings (minifundios) is better exemplified when farms under 5 hectares are considered. In 1952, the proportion was very high 57.0 percent of the total number of farms with an area of 202,232 hectares or 8.1 percent of the total farm area. The situation was not very different in 1965-66, as the number of farms under 5 hectares represented 47 percent of the total with only 5.3 percent of the total farm area. Furthermore, even the extreme minifundios--farms under one hectare--were 15,394 (9.9%) and 26,719 (14.9%) in 1952 and 1965-66 respectively.

The existence of small farms is very widespread throughout the country although they are generally more concentrated in the southwestern, southern and central regions where rural population density is high, 0.6, 1.1, 1.8 hectares of agricultural land per rural persons respectively.[53] These three regions hold 63 percent of the total rural population in the country.

By the same token, latifundios (very large farms) were also very widespread geographically in the whole country. Nevertheless, farms above 200 hectares, in area terms, were predominant in the northern (except the Depart-

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[53]Departments of Copan, Lempira, La Paz, Ocotepeque, Santa Barbara, Intibuca, Choluteca, Francisco Morazan and Comayagua.

ment of Atlantida), southern and central regions. In the eastern and southwestern regions, the Departments of El Paraiso and Santa Barbara showed the greatest number of large estates. (See Tables XI and XII).

Table XII shows that in the Departments of Atlantida, Colon, Olancho and Gracias a Dios (not shown on table because it was created until 1957), located in the northwestern and eastern regions of low rural population density, had not a very large number (in percentages), of farms above 200 hectares, even though there is abundance of potentially usable agricultural land.

Also the Departments of Ocotepeque, La Paz, Lempira, Intibuca, and Valle, located on the southwestern and southern regions of very high rural population density, showed a similar pattern but probably resulting from an excessive fragmentation of rural property.

On the other hand, land concentration on large estates along with prevalence of small rural holding is characteristic of the following Departments: Cortes and Yoro in the northwestern region; Choluteca in the southern region; El Paraiso in the eastern region; Francisco Morazan and Comayagua in the central region, and Santa Barbara and Copan in the southwestern region.[54]

From the preceding sections, it is evident that land is very unevenly distributed in Honduras. In addition to the predominance of very small farms, insecurity of tenure is also wiedespread in the country especially among small producers. Owner-operated farms constitute less than a third of the total number of farms in the country and show great disparities in the control of farm land. Another important factor in the land tenure structure of Honduras is the prevalence of national and ejidal lands. The adverse effects of these systems of land tenure on agricultural development would be examine in Chapter XII.

[54] For the purposes of land tenure analysis they are included in the southwestern region, although in ecological terms they are in the northwestern region. See Chapter VIII.

CHAPTER XI

HISTORY OF LAND TENURE INSTITUTIONS IN HONDURAS

Historical Introduction

During the Pre-Columbian period, the Mayas, an American Indian civilization, that flourished in the Yucatan Peninsula in Mexico, Guatemala and western Honduras, held the land in a collective fashion. This system of land organization was the result of their political and religious believes. Since that time, corn constituted the main staple food and its cultivation was subjected to magic-religious rituals.

When the Spaniards discovered and conquered America, the Crown reserved for itself the ownership of land. And in use of this right, Ferdinand V King of Spain, enacted a law on June 15 and August 9, 1513, for the granting of small tracts of land (caballerias and peonias) to lesser cavalry officers and common foot soldiers in the hope of encouraging farming to feed the new settlements, and large grants of land with the right to use the labor of resident Indians (encomiendas) among the more influential Spanish officers and civilians. The encomienda eventually became converted into real property in land and formed the basis of the large estates that have dominated the organization of Latin America even since.

During the reign of Philip II two ordinances were passed dealing with methods of land use in the New World. One, on May 25, 1523, prescribed the building of houses and the sowing of pastures for the new settlers communal use. The other passed in 1612, prescribed the use of land for specific purposes. The first legal provision in regard to land grants for agriculture and livestock for the province of Honduras was enacted in 1538.

From the economic point of view the colonial period established a feudal

type of organization through the encomienda system and most of the land was held in the hands of the conquerors and their descendants.

Past Legislation

After Honduras obtained its independence from Spain along with the other Central American nations (September 15, 1821), the government tried to stimulate agricultural production and family land ownership by the auction of public land. In addition, ejidal lands, that is, free land grants to municipalities, towns or villages by the State for distribution among the neighbors of those localities, was respected and its existence regulated. Its origin goes back to colonial times and the main source seems to be the old Indian communities.

Between 1836-1894, most of the land legislation was concerned with regulating the prices at which public lands were to be sold. In 1895, the first law was enacted intended to promote agricultural development (Ley de Agricultura) in the country. The Law is still in force with many modifications (1897, 1928, 1930, 1932, 1934).

On March 12, 1898, another important law was passed (Ley Agraria) with the objective of promoting agricultural and industrial development. It also regulated the procedures to follow in granting public lands. The law was revoked in 1962 by the enactment of the Agrarian Reform Law. The most important provisions of the Law were the following:

a) Public lands, could be sold by auction or through petitions of the interested grantees. Payments were in cash. The Law established prices for land classified as: first class, $0.10 per Has., second class, $0.075; third class, $0.05 per Ha. and fourth class, $0.025.

b) Public lands could be given without charge to Honduran family masters

who petitioned land. A tract of land per family was to be given for its habitation and patrimony. The grantees were require to retain possesion of the family lot for at least 10 years; to build a house, and cultivate at least half the farm area. Land titles and mensuration was provided by the Government without any charge.

c) Public land could also be rented to individuals that so wished. A payment in advanced was required before occupation of $0.225 per hectare. The Law limited the amount of land that could be petitioned. For agricultural purposes it should not exceed 100 Has. and for livestock raising 400 Has. For agricultural associations or companies as well as for individuals with adequate financial resources, the limit was 5,000 Has. For those, who in addition to farming the land, needed railroads, roads, etc., the limit was raised to 20,000 hectares.

Later on, a decree regulating land concessions on a large scale was introduced. It stipulated the methods and the requirements for obtaining land concessio s.

On April 2, 1936, and amendment was introduced to the 1898 Agrarian Law dealing with Ejidal Lands. The Law established that any town which is a provincial capital has a right to 3,500 Has. of national or public lands whose location is nearest to the town petitioning it.

The Law also stipulated that any village that has an elementary schcol and a population no less than 100 inhabitants has a right to 1,600 Has. (16 Km.) of ejidal lands.

On Article 23, the law sets the limits for the grants of ejidal lands (25 Has.) and authorised the purchase of ejidal land up to 10 Has.

Plantation System

The plantation system in Honduras is associated with the cultivation of

bananas. It started in 1902 and has since then very much influenced the economic life of the country. The production is located on the north coast, in the Departments of Cortes, Atlantida, Yoro and Colon. Originally there were four U. S. owned companies: (1) the Cuyamel Fruit Co., (2) the Tela Railroad Co. (subsidiary of the United Fruit Co.), (3) the Standard Fruit Co., and (4) the Truxillo Railroad Co. Today, only the Tela Railroad Co., and the Standard Fruit Co. exist; the Cuyamel Fruit Co. was absorbed by the Tela Railroad Co., and the Truxillo Railroad Co., ceased operations (it owned 200,000 Has.).

The first land concessions were granted on April 8, 1912 to the Tela Railroad Co., in which a series of privileges were stipulated. Among them, the free use of land and water, tax exemption for the construction, maintenance and functioning of railroads and docks. The duration of the contract was for 60 years. However, in 1949 the contract was modified by the introduction of the income tax since up to that year the Tela Railroad Co. had paid only very small minicipal and export taxes (export tax was L. 0.01/bunch). The tax was to be levied on the Company's net profits; the top ceiling being 15 percent over the net income derived from the company's total operations. At the same time, the Tela Railroad Co. was to be exempt from any other taxes and the new contract was for 25 years.

As a consequence, the growth of the Honduran economy has been very much dependent on the activities of the banana plantations. Between the two world wars, banana exports accounted for 88 percent of total exports. In 1931, Honduras was the leading exporter of bananas. From 1935-39, Honduras supplied 9.3 percent of total world exports increasing to 18 percent during the period 1945-50. Since the 1950's the share of Honduras' banana exports have been declining (they represented 11% in 1959). By the same token, the share of ba-

nanas in total exports declined from 79 percent in 1945 to 44 percent in 1960 but increased again to 50 percent in 1966. In 1945, the banana production share of gross domestic product was 22 percent declining to 13 percent in 1962. It is estimated that 10 percent of total fiscal revenues (1950-58) was provided by both banana companies.

Of the two companies, the Tela Railroad Company is the largest one in relation to the volume of production and land area. However, since 1950 its relative position has been declining. In 1950, 72% of the two companies total production, was supplied by the Tela Railroad Company. By 1960, the Standard Fruit Company was supplying nearly 40 percent of their total production.

The Tela Railroad Co. had 125,400 hectares and rented 27,000 more hectares for a total of 148,400 (1959). Only 11,200 Has. were dedicated to bananas (7.5%) in 1959; 49,000 to pastures, african palm and forests, the remaining was fallow land. In 1959, it employed 10,500 workers figure that contrasts with 26,300 workers in 1953. The reduction in employment is due: (1) to the substitution of the manual labor method of combating two plagues (sigatoka and Panama disease) by helicopters,[55] (2) the reduction in area planted due to higher costs for combating the plagues, (3) increasing mechanization of the crop, resulting from higher wages paid to workers since the 1954 strike. Very recently, the Tela Railroad Co. Research Bureau, introduced a new banana variety in the market, known as Valery, which is more resistant to the Panama disease than the old variety Gros Michel.

The Standard Fruit and Steamship Company is the second largest. At the end of 1959, it employed 5,600 workers a reduction of 6.400 men from 1955.

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[55]The manual method to combat the Sigatoka disease, for example, employed 74 men per hectare, and by the use of helicopters, 2,800 men were displaced.

T A B L E X I I I

HONDURAS: SETTLEMENT PROJECTS, AREA AND NUMBER, 1961

Project Name	Location	Number of plots		Area (Has.)
		Distri.	in Process	
Colonizacion Catacamas	Olancho	37	89	2,493
Colonia Valle del Aguan	Colon	49	-.-	500
Lotificacion Valle del Lean	Atlantida	366	18	9,000
Colonia de Guaynas	Yoro y Atlantida	191	129	5,700
Colonia Monjaras	Choluteca	161	11	1,700
Colonia Ola	Choluteca	-.-	414	8,243
T O T A L		804	661	27,636

SOURCE: Los Problemas de la Tierra en los Paises Centro Americanos, CEPAL/FAO/ICAI/OIT/IUCAIES/, San Jose, 1963.

The banana plantations are located near the northern city of La Ceiba, 120 Km. east of the Tela Railroad Co. plantations. The area covered by these plantations is of 5,000 Has. Until recently about 50% of the exportable production was bought from small national producers, but due to the sigatoka disease they disappeared, and now the company produces by itself all the banana output for export, as well as does the marketing and distribution of the product.

Much of the reduction in employment by the Standard Fruit Co. is similar to that of the Tela Railroad Co. As its competitor, it introduced a new variety more resistant to the Panama disease, known as Cavendish. In addition to bananas, the Standard Fruit Co. produces oranges, grapefruits, coconuts and meat. The cattle herd is 11,000 heads which is smaller than the one owned by the Tela Railroad Co. (25,000 heads).

Land Settlement

Since 1951, the Government of Honduras has been trying to organize in an orderly manner various land settlement projects. Until 1961, 804 family lots have been distributed and 661 more were in the process of being distributed. The total area on land settlement projects in 1961 was 28,000 Has. At the end of 1967, the number of families settled were 2,000 in an area of 28,000 hectares. Table XIII gives an idea of the settlement projects carried out until 1961.

In order to describe in a very general way the nature of these projects, two would be noted:

a) Colonia Agricola del Aguan. The project is located in the Aguan Valley on the northeastern part of Honduras. About 50 families were settled in former banana lands which have been returned to the Government by the Truxillo Railroad Company. The Government provided the administrative personnel, a physician and nurse and built the necessary housing for the new settlers.

The agricultural production is composed of corn, beans, rice, sugar cane, oranges and bananas. The settlement produces enough food for its internal consumption, yet it has been unable to sell their surplus to other markets because of marketing and price problems. The net income per family was estimated at $210 a year (1959).

For budgetary reasons the Ministry of Natural Resources suspended all administrative aid to the projects. It is now under the responsibility of the Institute for Co-operative Promotion, which has formed a co-operative to carry out most of the functions of the project. There is no available information on the actual situation of the co-operative and the land settlement project in general.

The Agrarian National Institute has a more ambitious project for the lower Aguan Valley. It plans to settle 3,049 families on 40,000 hectares of uncultivated land with the purpose of increasing agricultural exports, food supply, and for substituting agricultural commodities presently imported. The cost of the project would run approximately 14 million dollars because extensive outlays for clearing, drainage, access road, marketing facilities, credit and community services are required to implement the project. About 32 percent of the cultivable area is to be planted with annual crops (corn, beans, rice, vegetables) and 50.5 percent with permanent crops (rubber, cacao, citrics, pastures, african palm, bananas). The area has a tremendous potential for agriculture and livestock raising.

b) Valle de Lean Project. It is located in the Department of Atlantida with easy access to the large cities of the Honduran north coast. (San Pedro Sula, La Ceiba, Tela and Puerto Cortes). The main crops of the project are corn, beans, rice and cacao. In 1959, it exported 260,000 quintals of corn to El Salvador for a value of more than $500,000. The average income per ca-

pita is $310 a year. A co-operative exists which has been very successful.

The Government plans to enlarge the project and has planned to invest 6.2 million dollars to settle more families. Another important project is to be located on former banana lands in the Sula Valley (also in the north coast) for the settlement of 350 families on 4,000 hectares. These are cleaned lands, with drainage, flood control and access to markets, and need only the addition of community services.

Finally, there is still another project intended to reorganize the Monjaras-Buena Vista project in southern Honduras. The approximate cost is $2 million.

Present Legislation

Decree No. 2 to issue the Agrarian Reform Law was promulgated in Honduras on September 29, 1962. As it was the case in Venezuela, Colombia, Peru, Costa Rica, Ecuador, the enactment of the law came through the democratic process.

The compeling reasons for promulgating the Law, were the following:

a) The inadequate system of land ownership, tenure and use prevailing in the country.

b) The backwardness of the agricultural sector and the need to create favorable conditions for development in rural areas.

c) To comply with objective No. 6 of the Alliance for Progress, which stipulated the transformation of present unjust systems of land tenure and use into more equitable ones.

d) The desire of the government to retain the popular support of the peasants.

e) In the political scene of Honduras, demostrate that the party in power was a progressive one permeated with peasant and workers' desires.

The main object of the reform, as stated in Article I, is to change the agrarian social pattern and associate the rural population in the economic, social and political development of the country. To this end it is intended that the system of latifundia (large landed estates) and minifundia (very small holdings) shall be replaced by a fair system of land ownership, tenure and use, with equitable distribution, sufficient credit and all necessary assistance to the farmer. A further fundamental aim of the reform is conservation and development of the country's renewable natural resources, since--it is declared--the State should ensure that the fullest advantage is derived from these resources by national dynamic means (Article, 180).

It is in the public interest, the Law states on Article 2°, for land to be divided equitable into holdings of a size which can be economically operated, so that rural families fitted for cultivation or stock raising may satisfy their material and moral needs from the produce of their land and at the same time contribute to the national agricultural output. Land is to be allotted preferably in the places where the receipients work or live or,--if circumstances render this advisable--in areas especially selected for the purpose. On Article 3°, it is declared to be in the public interest to abolish latifundia, eg., any estates exceeding the area prescribed by the Law as the maximum which may be owned by an individual or company.

In connection with the objectives of agrarian reform, the State will ensure adequate living standards for agricultural wage earners by regulating their terms of employment and working conditions.

The Law stipulates that private property must have a social function. It is declared incompatible with the social function of property for land to remain uncultivated or idle, or to be farmed by any indirect method (rent

tenancy, sharecropping, etc).[56]

The National Agrarian Institute will be responsible for applying the Reform Law: it will be advised by the National Agrarian Council and assisted by a legal service. Article 13° stipulates that the Institute will have legal personality, administrative independence and separate property. It will consist of a director, an assistant director, and the necessary administrative personnel.

By Article 28° of the Reform Law, the Institute will earmark for agrarian reform: national lands, community (ejidal) lands and privately owned land except as defined in the following paragraph. Land improved by public irrigation schemes are to come under the reform, if privately owned, such property will be purchased or expropiated by the Institute, the owners being allowed to retain up to 200 hectares.

The reform will not apply, according to Article 29, to: irrigated lands up to 50 hectares which are under cultivation, or the equivalent in other classes of land or by regions; lands regardless of classification or area, which are adequately oper ted in conformity with the principles of the social function of property; ejidal lands up to 25 hectares, if cultivated and enclosed; building, constructions, industrial or commercial installations and national reserves. Priority in types of private land to be use for settlement or distribution: (a) idle lands, (b) indirectly cultivated land, (c) land set aside for private colonization schemes uncompleted. Implied in the Law, though not specified, that prior use is to be made of state and ejidal land.

Farms of 5 hectares or less are considered indivisible for all purposes

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[56] According to the Law, land is deemed uncultivated or idle if it is neglected in its natural state, or has not been properly used, or gives an unduly low yield from agriculture.

of the Agrarian Reform Law, and any deed or contract contraverting this rule is null and void. Exceptions (Article 48) are: lands donated by the owner of a large estate for several farm workers' dwelling and small allotments; deeds or contracts under which small plots are set aside for a main purpose other than farming; and land or which possesion was taken before the enactment of the new Law.

The Law establishes that all national lands belong to the state (Article 31) and its lease and sale is forbidden. The Institute is to require the inmediate restitution of such lands if held by private persons either unlawfully or without performance of the conditions on which it was conceded. However, any person who can give satisfactory proof to the Institute that he has peacefully occupied national land more than five years before the enanctment of the Law shall be entitled to adjudication of such land if it is worked in accordance with the social function of property.

The Law permits the expropiation[57] of privately owned land subject to prior cash payment of a price fixed by experts on the average of valuation by a representative of owner, of Institute and (if no agreement) a third valuer appointed by the two, or (if no agreement) by Civil Court. Articles, 49, 50, 51, 52, 53, lay down the administrative procedures for expropriation.

Articles 54 and 55, stipulate that lands which exceed the area to which the agrarian reform is inapplicable, and are uncultivated or idle or notoriously badly farmed, will be taxed at an increasing annual rate, without prejudice to their expropriation if required for the reform programme. This tax, which will come into effect two years after application of the Law, is to range between 3 percent of the declared value during the first year and 40 percent

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[57] Lands in which the social function of property is not met, whether it is a latifundio or minifundio

of the said value during the fifth and following years.

In regard to the beneficiaries of the reform, Article 68 states that to be eligible for a grant of land, an applicant must be Honduran by birth and either a male over 16 years of age, or married, or a spinster or widow with a dependent family. His usual occupation being farm work. He must not possess as much land as the unit granted, nor more than 1,000 Lempiras ($500) invested in industry or commerce, nor more than 2,000 Lempiras ($1,000) invested in agriculture.

Article 69 sets the priorities for the selection of beneficiaries: (a) local tenants, squatters, sharecroppers, etc., (b) owners of minifundia which, have been expropiated for regrouping into units of standard size, (c) female peasants with families, (d) male peasants with family, (e) landless male peasants without dependants, age 16-60 years (priority for younger), (f) graduates of agricultural schools, and (g) unmarried males over 16 years of age not normally occupied in agriculture but wishing to engage therein.

The size of grants will be not less than 10 nor more than 20 hectares in irrigated zones, or the equivalent elsewhere. The Institute can change the size of the holding. Each person may have one unit only. Article 74, establishes that no down payment in advance for the land would be required and is to be paid in a period not less than 10 and not more than 20 years, starting one year after the beneficiary takes possession. Article 76, says that, years, in which harvests are lost through no fault of the farmer, will not be counted in the repayment period. No interest will be payable in the case of holdings granted from state-owned land; interest at not less than 3 percent per annum will be charged if the land was bought by the Institute and not less than 4 percent, if the grant was made from privately owned property. (Article 77).

Any person receiving a grant of land will acquire absolute ownership on

making the last annual installment in the case of land purchased, or one year after entering into possession (provided he has farmed efficiently) in the case of land awarded free of payment. From the time of the award, each holding will be an imprescriptible family estate, exempt from taxation and attachment. It may only be leased or sold with the Institute's authorization in cases which the Law defines. Furthermore, the family estate must be an economic unit, operated personally by the owner and his family.

The Institute's function is to create new agrarian centers in selected development zones; to be equipped with schools, health centers, sports grounds, houses. Credit must be provided, technical assistance granted, cooperatives encouraged, marketing facilities established as well as minimum prices. Provisions about the use of water is also specified.

Finally, in relation to agricultural contracts, the Institute has power to intervene as an arbiter or conciliator if any disputs or differences between the parties to an agricultural contract threatens to affect collective interest. Eviction of tenants and approved squatters is possible only with the permission of the Institute. In the case of lessees classified as small or medium farmers, non-payment of rent shall not be sufficient reason for demanding eviction, or termination of the contract, if non-payment can be proved to be due to loss of harvest through no fault of farmer, and if he has no other source or activity of income sufficient to pay the rent.

The Law establishes that tenants have pre-emptive rights to the land. The Law declares null and void any tenancy contract requiring the lessee to obtain supplies from the land-owner or lessor; to sell the produce to the land-owner or specified persons; to pay the rent in kind or labor; to obtain supplies from any particular factory or business, etc. Improvements made by lessee are also recognized.

CHAPTER XII

SOCIAL AND ECONOMIC CONSEQUENCES OF LAND TENURE STRUCTURES

In order to provide a common denominator for the analysis of this chapter, farm holdings have been classified in four basic size categories according to the number of families that each unit or group of farms is able to sustain. The four categories are as follow: below family size units, family-size units, medium multifamily units and large multifamily units.

The first two categories are simple family holdings, that is, generally with one agricultural producer and his family working one farm. The basic difference between a family-size unit and s sub-family farm, is that the latter is insufficient by itself to absorb the labor force available in a family so that unemployment may resutl, and income be so low as to give only a precarious livelihood, with an uncertain food supply and very slight drawing on the manufactured goods market. The average size ranges from below 1 hectare to below 10 hectares and is also known as minifundio.

On the other hand, the family-size farm can provide a normal amount of work for the family, and at the same time can reach a sufficiently high income level to free the family from the pressure of the need to procure food. Such farms allow savings to be made and capital to be formed with certain technological advances, and it is on them that improved productivity per capita and other attributes of economic progress can be attained. The sizes range from 10 to 49.9 hectares.

In contrast, there is the medium and large multi-family units. The most important factor common to them both is that they are potentially or at the present time, able to provide income and employment for several families. The majority of members of these families are usually wage earners, and in view

of this, they are subdivided into medium and large-size multi-family units, the main distinguishing feature being that they need to have a bureaucratic administrative organization because of the increased number of workers required. The plantation and the very extensive large cattle ranches are included in the latter. Medium-size family farm range between 50 to 499.9 hectares while the other type is above 500 hectares.[58]

According to the above classification, below family farms in Honduras (in 1952) were 120,270 or 77 percent of the total number of farms with 20 percent of the total farm area. On the other hand, multifamily large farms represented 0.3 of the total number of farms and occupied an area of 487,200 hectares or about 20 percent of total land area. Family farms were only 22,180 (14.2%) with 413,300 hectares equivalent to 16.5 percent of total farm area. There is no information available for 1965-66 on these types of farms, except for very rough calculations made by the author of this thesis that would be shown later.

Factor Use

The characteristics of land tenure and farm size described in Chapter X very much influence the way in which the factors of production in agriculture are used. In the following section, the use of land, labor and capital would be analyzed in relation to the forms under which land is held, and the size of holdings as such.

Land use. Table XIV shows land use for the whole country and by regions

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[58]The methodology employed is from; Sergio Maturana, Los Problemas de la Tenencia de la Tierra en los Paises Centroamericanos, CEPAL/FAO/ICAI/OIT/IUCAIES/ (San Jose, 1963), pp. 83-85; Sergio Maturana,"Land Tenure in Central America", Seminario sobre la Investigacion Sociologica y los Problemas de la Vida Rural en America Central, ed. UNESCO (Mexico, 1962), 14.

T A B L E X I V

HONDURAS: LAND USE BY REGIONS, 1952-1965-66

Region	Total Farm Area[1]		Land Area in Different Uses[2]						Others[3]	
			Total Crops		Pastures		Forest			
	Has.	%	Has.	%	Has.	%	Has.	%	Has.	%
1952										
North	508,612	20.4	102,919	20.2	162,487	31.9	103,243	20.3	139,963	27.5
South	359,872	14.3	52,511	14.6	154,917	43.0	73,474	20.4	78,970	21.9
West	856,823	34.2	161,745	18.9	237,597	27.7	164,548	19.2	292,922	34.4
East	349,718	13.9	79,311	22.6	126,852	36.3	63,827	18.2	79,728	22.8
Central	432,379	17.2	76,518	17.7	140,709	32.5	123,469	28.6	91,623	21.2
Total	2,507,404	100.0	471,064	18.8	822,562	32.8	568,551	21.1	685,206	27.3
1965-66										
North	499,820	20.7	109,137	21.8	--.--	--.--	--.--	--.--	390,683	78.2
South	296,825	12.3	66,238	22.3	--.--	--.--	--.--	--.--	230,587	77.7
West	832,273	34.4	179,394	21.5	--.--	--.--	--.--	--.--	652,879	78.4
East	406,356	16.8	93,178	22.9	--.--	--.--	--.--	--.--	313,178	77.1
Central	381,776	15.8	84,517	22.1	--.--	--.--	--.--	--.--	297,259	77.9
Total	2,417,050	100.00	532,464	22.1	--.--	--.--	--.--	--.--	1,884,587	77.9

1/ Percentage is expressed as area of each region over total area

2/ Percentage is area in use in relation to the area in each region

3/ Includes fallow land.

SOURCE: Cifras Preliminares Segundo Censo Nacional Agropecuario, 1965-66, Direccion Gsneral de Estadistica y Censos, Tegucigalpa, D.C., 1967; Informe Oficial de la Mision 105 de Asistencia Tecnica Directa a Honduras, OEA, Washington, D.C., 1963.

in 1952 and 1965-66. The most significant feature is the low proportion of farm land dedicated to crops in 1952 (18.8%) and in 1965-66 (22.1%), which represents about 4 and 5 percent of the total area of the country.

According to a recent study made by FAO about the potential land use in Central America, there were 1,992,760 hectares of land suitable for annual and permanent crop cultivation in Honduras (1964). Out of this total, about 872,600 hectares were considered to be of very high yielding potential for annual crops and 867,000 hectares of moderate yields for permanent crops. The remaining area, 253,160 hectares was of moderate yielding potential for annual crops and a combination of permanent crops and forestal use. The agricultural land represented about 18 percent out of the total area in the country.[59] The actual cultivated area reported in the 1965-66 Census, amounted to 542,600 hectares, or 25 percent of the land suitable for agricultural purposes. The area of annual crops (342,100 Has) was about 37.6 percent of the potential land usable for this type of crops, and the area for permanent crops (190,500 hectares), was only 19.5 percent of the total potentially usable land for permanent crops (970,690 hectares).

The high proportion of land left uncultivated (78% in 1965-66 and 81.2 percent in 1952) is, in part, due to the difficult topographical conditions of the country and the lack of needed infraestructure (roads, drainage works, storage facilities) to make these lands accessible. Nevertheless, the low proportion of land under cultivation, is not only a consequence of these factors, but the ways in which land is distributed and the land tenure structure of the country.

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[59] Uso Potencial de la Tierra: Honduras Parte V, Organizacion de las Naciones Unidas para la Agricultura y la Alimentacion, (Roma, 1967), pp. 21-22.

- TABLE XV

HONDURAS: LAND USE BY SIZE AND FORM OF TENURE, 1952-1965-66

(IN THOUSAND HECTARES AND PERCENTAGES)

Years	Size of holding	Crops: Annual Area	Annual %	Permanent Area	Permanent %	Fallow Area	Fallow %	Pastures Area	Pastures %	Forests Area	Forests %	Unproductive Land Area	Unproductive Land %	Total
1952	All Sizes	296.4	100.0	174.6	100.0	424.9	100.0	822.6	100.0	528.5	100.0	260.5	100.0	2,507.4
	Below Family size	176.2	59.5	57.8	33.2	91.7	21.5	89.3	10.0	48.2	9.0	42.7	16.4	505.9
	Family size	63.2	21.2	39.7	22.7	93.2	22.0	107.3	13.0	60.7	11.5	49.2	18.5	113.3
	Multifamily medium	54.1	18.2	43.3	24.8	181.7	43.0	420.8	52.0	289.3	54.5	111.7	44.5	1,101.0
	Multifamily lsrge	2.9	1.1	33.8	19.3	58.2	14.0	205.2	25.0	130.3	25.0	56.9	21.6	487.2
	Forms of tenure													
	Owned	--.--	6.0	--.--	4.0	--.--	15.0	--.--	37.0	--.--	27.0	--.--	10.0	100.0
	Ejidal	--.--	15.2	--.--	9.2	--.--	21.5	--.--	30.3	--.--	13.3	--.--	11.0	100.0
	Leasehold	--.--	30.9	--.--	10.6	--.--	17.9	--.--	21.6	--.--	12.6	--.--	6.4	100.0
	Sharecropper	--.--	82.5	--.--	4.6	--.--	4.8	--.--	5.4	--.--	1.7	--.--	1.0	100.0
	Colonato	--.--	75.2	--.--	5.6	--.--	6.4	--.--	5.8	--.--	2.7	--.--	4.3	100.0
	Occupier	--.--	25.2	--.--	14.0	--.--	19.0	--.--	23.3	--.--	11.2	--.--	7.3	100.0
	Mixed forms	--.--	14.5	--.--	7.7	--.--	14.5	--.--	29.4	--.--	22.0	--.--	11.9	100.0
1965-66 1/	Owned	--.--	7.7	--.--	5.8	--.--	***.**	--.--	--.--	--.--	--.--	--.--	86.5	100.0
	Ejidal	--.--	19.0	--.--	20.0	--.--	--.--	--.--	--.--	--.--	--.--	--.--	70.6	100.0
	National	--.--	17.2	--.--	15.8	--.--	--.--	--.--	--.--	--.--	--.--	--.--	70.3	100.0
	Leasehold	--.--	55.6	--.--	8.0	--.--	--.--	--.--	--.--	--.--	--.--	--.--	36.4	100.0
	Occupier	--.--	27.9	--.--	8.4	--.--	--.--	--.--	--.--	--.--	--.--	--.--	63.5	100.0
	Mixed forms	--.--	18.0	--.--	8.0	--.--	--.--	--.--	--.--	--.--	--.--	--.--	74.0	100.0

1/ For 1965-66, under the lsst item::fallow land, pastures, forests, and unproductive lsnd, is included.

SOURCE: Cifras Preliminares Segundo Censo Nacionsl Agropecuario, 1965-66, Tegucigslpa, D.C., 1967; Tenencia de ls Tierra y Condiciones del Trabajo Agricols en Hondurss, Instituto de Investigsciones Economicas y Sociales, Monogrsfia No. 1, Tegucigalpa, D.C., 1961.

The size of farm holdings in Honduras have a close relationship to the manner in which land is used in regard to the type of cultivation (annual or permanent crop) as well as the degree of intensity with which the land is worked.

Table XV shows percentages and absolute amounts of different land use for crops, pastures, forest, etc., for 1952 and 1965-66, by size and form of tenure.

The analysis of that table offers very interesting results. In the first place, the smaller the size of holdings the greater the proportion of farm land dedicated to annual and permanent crops. Secondly, as size increases, the area dedicated to pastures also rises especially in the two larger sizes (77%). Thirdly, the larger the farm unit, the more extensive the area kept in forest and fallow land. Thus, the area dedicated to crops--annual and permanent--is in inverse relation to the farm size and that for pastures, fallow and forests a direct one.

In 1965-66, very rough estimates indicate, that about 63 percent of the total crop area in below family-size farms was under annual crops. On the other hand, the proportion of farm land under permanent crops increased to 37 and 13.9 percent for family and multi-family medium size farms respectively. The reduction of permanent crop area in below family-size farms, probably resulted from the shrinking size of their holdings due to population growth, and the increase in permanent crop area for the other two categories, reflects the expansion of cultivated area for such export crops as: coffee, tobacco and cotton. Multifamily large farms showed a decline in total cultivated crop area, the only possible explanation being, that in 1952, that area was not as large as it was reported.

The data on Table XV, also notes that, of all the tenure forms existing in Honduras in 1952 and 1965-66, owner-operated farms used most of its farm area for pastures, fallow and forests. The proportions were 90 and 86.5 percent for the years in question. As it was pointed out in Chapter X, owned farms represented the largest number of farms above 200 hectares, which would seem to indicate that a great deal of land is left for grazing or left idle. Most of crop cultivation in this tenure group is done in farms below family and family sizes.

On the other hand, non-owner operated farms (leasehold, sharecropper, colonato), showed more than 40 percent of their total area, dedicated to crops especially to annual crops. In fact, the area under annual crops in sharecropping and colonato was 82 and 75 percent respectively (1952).

The high proportion of farm area in annual crops is the outcome of the prevalence of very small farms and insecure forms of land tenure. Under these circumstances, the producer wants crops that have a very short production cycle, so that, he can obtain two or three harvests in the year in order to fully utilize his land and labor. Furthermore, the combination of small holdings and insecure tenure does not permit the producer to adopt conservation measures. In Honduras, the situation had led many producers to cultivate annual crops in very steep land suitable for pastures or forest, causing in most instances a great deal of erosion. Furthermore, in small farms (below family and some family farms) rotation practices are seldom used.

The preceding paragraphs lead to the following conclusions:

a) The high proportion of farm area used for pastures, forest or left idle, reflects a bad utilization of land considering that Honduras has a good potential for increasing agricultural production.

b) The present system of land tenure and land distribution prevents the rational and efficient use of land and labor. The latifundios by keeping a large proportion of land in pastures, idle or in forests are wasteful of land and of labor because of their excessive size. On the other hand, minifundios (small farms) cannot use labor available efficiently and their very intensive land cultivation, is not conducive to conservation or rotation practices.

c) Land use does not usually respond to crops best suitable for a particular type of soil. For example, in parts of Honduras, annual crops are planted in lands not suitable for that type cultivation.

Labor. As it was the case with land, the amount of labor is related to the size of holding.

The most obvious effect on employment of an agrarian structure characterized by a few large estates on the one hand and a vast number of sub-family farms (minifundios) on the other is to force a desproportionate share of the agricultural labor force to rely on sub-family farms for its livelihood. In Honduras, it is estimated that sub-family farms with less than 20 percent of the land, provide employment to 62 percent of the active agricultural population; in contrast, multifamily farms with about 63.3 of the land employed 21 percent of the work force. Family farms were in an intermediate position employing 16.9 percent of the labor force in 16.5 percent of the land.

It is believed that unemployment and underemployment is widespread in Honduras, especially in small farms. In sub-family farms and family farms there were 2.1 and 3.1 workers per farm respectively, which means that, if the average rural family is of 5 members, the three and two other members of the family are left idle. In fact, sub-family farms cultivators work on the average 93.9 days a year, or only 32 percent of the available family work for a total annual loss of 48,172 million hour of work annually. The family farm

cultivators work 142 days a year or 74 percent of the available family work for a total annual loss of 3,479 million hours of work annually.[60]

The ratio of arable land (area under permanent crops, annual crops, fallow and pastures) to agricultural worker is used to measure the degree to which different farm sizes can effectively employ those engaged in the farm as well as those that may be added to its labor force. On sub-family farms there is only 1.6 hectare for each agricultural worker to be employed fully and productively. In contrast, the arable land available per worker is from 10.3 to 11.5 on multifamily farms and 4.4 in family farms which is about the national average (4.2). The land-labor ratio indicates that there are good possibilities for increasing employment opportunities in units other than sub-family farms. It also indicates the inefficient use of the available labor force in large estates as well as unemployment and underemployment problems created by too many small farms.

Capital. Farms in Honduras are characterized by the limited use of capital. The average value of working capital per farm was only $770 in 1961. It ranged from 45,342 dollars in multifamily large farms to as low as 372 dollars in sub-family farms. Although, subfamily farms had about 41 percent of the total value of working capital (due to their vast number) in farms, it was mostly in the form of livestock. Machinery equipment and simple tools constituted only about 1.0 percent of total working capital and 2.1 percent of that item. Family farms showed the same characteristics though they had a larger value of working capital per farm (1,034 dollars).

In contrast, multifamily large farms had a very high value of working

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[60]Sergio Maturana, Los Problemas de la Tenencia de la Tierra en los Paises Centro Americanos, CEPAL/FAO/IICA/OIT/IUCAIES/ (San Jose, 1963), pp. 88-90.

T A B L E X V I

HONDURAS: RELATIONSHIP BETWEEN THE GROSS AGRICULTURAL VALUE OF PRODUCTION AND AREA USED BY SIZE, 1952

Size	Gross value[1] of Output (in Thousands)	No. Farms	Average Size (Has.)	Value Farms	Average[2] Hectare used (Has)	Value per Hectare Used	N° worker (in thousands)	Value Output per worker
Sub-Family	37,800	120,270	4.2	320	1.8	172	255.5	148
Family	17,700	22,180	18.6	800	9.5	83	69.2	256
Multifamily Medium	25,100	13,250	83.1	1,930	42.1	46	58.5	430
Multifamily Large	42,400	440	1,107.1	92.500	600.0	150	26.3	1,600
All Sizes	122,000	153,140	16.1	780	8.3	94	409.5	298

[1] All values expressed in dollars.

[2] Area in farms used in: pastures, permanent and annual crops.

SOURCE: Tenencia de la Tierra y Condiciones del Trabajo Agricola en Honduras, Instituto de Investigaciones Economicas y Sociales, Monografia, No. 1, Tegucigalpa, 1961.

capital per farm, $45,342 and a more diversified capital stock (fixed, variable, and working capital). The average total capital per farm was $14,850 while for sub-family and family farms was 56.5 and 200 dollars respectively.

The use of capital per hectare is very low in multifamily farms. It was estimated at 35 and 82 dollars per hectare, for multifamily medium and large farms. On the other hand, it was about 140 dollars per hectare in sub-family farms and 204 dollars per hectare in family farms.[61] Such results are of course not surprising given the small amount of the input land in sub-family and family farms. The average output per capital used was 0.58 for sub-family farms and 1.75 for multifamily large farms reflecting the low productivity levels for the factor capital in both sizes.

Output, Productivity and Technology

Output and Productivity. One of the most important relationships between land tenure systems and agricultural development is the efficiency with which resources are used in each farm size.

In Table XVI estimates are presented which give an indication of the value of output per unit of arable land, and per worker on the four size classes of holdings mentioned before.

Several conclusions can be drawn from this data: (1) the value of output per unit of land generally falls as farm size increases with the notable exception of multifamily large farms but it is still lower than the first size group, (2) in contrast, the value of output per agricultural worker generally rises as the size of the holding increases. The main reason for these two opposite tendencies is the change in factor proportions which occur as farm

[61] Instituto Universitario Centro Americano de Investigaciones Sociales y Economicas, Encuesta Socio-Economica en Zonas Agricolas Seleccionadas de los Paises Centro Americanos, (San Jose, 1964), p. 107.

TABLE XVII

HONDURAS: AREA PRODUCTION AND YIELDS FOR SELECTED PRODUCTS BY SIZE, 1952

(IN THOUSAND HECTARES, THOUSAND QUINTALS AND QUINTAL PER HECTARE) 1/

Selected Products	Sub-Family			Family Size			Multifamily Medium Size			Multifamily Large			National Average Yields
	Area	Produc-	Yield	Area	Produc-	Yield	Area	Produc-	Yield	Area	Product	Yield	
Corn	155.9	2,496.1	16.0	51.5	891.3	17.5	43.9	736.3	16.8	2.1	45.9	21.8	16.5
Beans	29.3	270.5	9.4	11.1	114.3	11.8	9.2	93.3	10.1	0.3	5.2	14.5	9.8
Rice	5.8	124.5	21.4	2.9	73.9	25.0	2.0	47.2	23.0	2/	1.5	24.6	22.6
Cotton	2/	1.8	32.0	2/	0.9	26.4	1.1	18.8	17.6	0.4	7.7	19.4	18.8
Tobacco	2.6	55.3	20.0	0.8	21.3	27.4	0.3	9.3	24.6	--.--	---.---	--.--	22.3
Bananas	3.3	2,371.6	710.0	2.7	1,929.9	710.0	1.7	1,191,8	695.0	16.0	12,400.0	770.0	750.0
Coffee	25.4	117.2	4.6	17.7	77.9	4.3	23.9	110.6	4.6	1.2	3.7	3.2	4.5

1/ 1 quintal = 100 lbs.

2/ less than 100 hectares

SOURCE: Tenencia de la Tierra y Condiciones del Trabajo Agricola en Honduras, Instituto de Investigaciones Economicas y Sociales, Monografia No. 1, Tegucigalpa D.C., 1961.

size varies. To accept the figures in Table XVI as the result of optimal resource allocation--given solely the constrain of size of holding--is far from the truth. A greater value of output can be attained by rearranging existing resources.

Table XVII gives more interesting data about output per unit area on different farm sizes. In general productivity is very low in all farm sizes especially in sub-family and family farms. On the latter ones, however, yields do not fall very much below the national average, and in permanent crops (bananas, coffee, tobacco) they, either are above or equal, the national average. Furthermore, in multifamily medium and large farms, yields are not very different from those in other size categories, reflecting the limited use of better farming techniques.

It is interesting to observe that family farms show high yields, by Honduras terms, for certain crops. This is especially true of rice, cotton, tobacco, beans and bananas. Yields in corn are also moderately high in comparison to the other farm sizes. As it was pointed earlier, it is on these farms that the greatest possibilities for technological innovation and increased productivity per capita and per unit area, is to be attained.

Sub-family farms' yields reflect the intensity with which the factor land is used in view of limited capital inputs and overabundance of manual labor. The probabilities for increasing yields in these farms is to come about by increasing the economic size of the unit (by substituing land by non-land inputs) or its physical size through consolidation of holdings, land distribution or other similar measures.

Another very important feature of farm sizes in relation to output is the high proportion of production and area on annual crops for the domestic market (corn, rice, beans), and some permanent crops for export (coffee and

TABLE XVIII

HONDURAS: INPUTS EMPLOYED, PRODUCTION AND INPUT-OUTPUT RATIOS, 1961

(IN DOLLARS AND HECTARES)

Item	Fco. Morazan Owners 1/		Choluteca Owners 2/		Lease-hold	Occu-piers 1/
	0-600	601-1200	1201-3600	Above 3600	0-600	0-600
Investment						
Land						
Area	5.4	8.5	570.8	1,084,6	1.8	9.2
Average total value	380	686	25,070	47,115	353	164
Labor						
Average N° men-days	253	903	2,251	11,468	241	349
Average total value	53	517	1,657	9,792	121	148
Labor/hectares men-days	47	106	4	11	134	38
Capital						
Average total value	918	1,735	20,019	88,870	70	221
Capital/hectare	170	204	35	82	39	24
Annual Costs						
Average total value	28	29	1,795	3,684	14	22
Costs/hectare	5	3	3	3	8	2
Inputs						
Value of land	23	41	1,504	2,827	21	10
Value of labor	153	517	1,657	9,792	121	148
Value of capital	55	104	1,201	5,332	4	13
Total cost value	28	29	1,792	3,604	14	22
Total value inputs	259	691	6,154	21,635	160	193
Output: (value)	295	677	8,136	47,974	91	158
Value input/hectares	48	81	11	20	83	21
Value output/hectares	55	80	14	44	51	17
Input-output ratio	0.88	1.02	0.76	0.45	1.76	1.22

1/ 0-600= Sub-family; 601-1200= Family

2/ 1201-3600= Multi-family medium; Above 3600= Multi-family large

SOURCE: Encuesta Socio-Economica en Zonas Agricolas Seleccionadas de los Paises Centro Americanos, Instituto Universitario Centro Americano de Investigaciones Sociales y Economicas, San Jose, 1964.

tobacco), on sub-family and family farms. This is perhaps a serious problem for Honduras in view of their low land and labor productivity in conditions of rising demand for agricultural products as population and income increases rapidly. In addition, the other two categories dedicate most of their available land for pastures.

The efficiency of the use of resources is very well depicted on Table XVIII. According to the data, the input-output relationship for multifamily farms is very low while for those in family (1.02) and sub-family farms (.88) tends to be very high. It reflects the high amount of inputs used per hectare (especially in family owned farms and sub-family leaseholds), in particular labor, in all sizes except the large ones. In the latter ones, the low input-output relationship is the result of limited use of labor and capital inputs in relation to land although the average value of these inputs is high. Another very important thing to consider is that leaseholds and occupiers applied less capital per hectare than any other form of tenure. Finally, capital-labor ratios, as expected, are low for sub-family and family farms, either operated by tenants, owners or occupiers, reflecting their low income and labor productivity. Yet, it also points out the possibilities for increasing output by additional doses of capital that would make labor more productive.

Technology. It is by now not very difficult to assert that agricultural technology and know-how is backward in Honduras. Chapter IX analyzed the situat on of the agricultural sector, in regard to the limited use of fertilizers, tractors, etc. It is important to know how technological change is hampered by the systems of land tenure.

In 1952, of the total area under annual crops (296,411 has), only 76,223 hectares (25.7%) were ploughed. If analyzed by size, 80 percent of the annual

crop land in multifamily large farms was not ploughed, 77.5 and 74.6 percent on family and sub-family farms and 69.1 percent on multifamily medium farms.[62]

The implements for ploughing were constituted mainly of wood and iron ploughs. There were only 283 tractors in Honduras in 1952, of which 156 units (55%) were owned by multifamily large farms, but the ratio of tractors to farms was only 0.3. There were 36,297 ploghs, 97% of which were made of wood. The proportion of wooden ploghs in each farm size ran as high as 60 percent on sub-family farms to as low as 0.3 percent on multifamily large farms. Iron ploughs were predominant on family farms (17.4% of total) and in medium farms (50%).

On the other hand, there were 36,297 farms with animal traction, or 23.2 percent of the total number of farms. On sub-family farms the proportion was only 17.7 percent reflecting the preponderance of human work. On family farms it was 30.5 percent and on multifamily medium and large farms 60 and 64.9 percent respectively.

The form of tenure determines the degree to which better farming methods are introduced. For example, in 1952, 54.8 and 49.8 percent all the tractors and iron ploughs were in owner-operated farms. By the same token, leaseholds had only 7.1 and 4.2 percent of tractors and iron ploughs while sharecroppers, colonato and occupiers had only 0.7, 0.5 and 3.4 percent of the total number of iron ploughs and 2.2, 2.4 and 4.8 percent of the wooden ploughs in the country respectively.

According to the Agricultural Development Program 1965-66, there were in Honduras 319,200 hectares (20% of total agricultural land) with irrigation pos

[62] Universidad Nacional Autonoma de Honduras, Tenencia de la Tierra, y Condiciones del Trabajo Agricola en Honduras, Monografia N° 1 (Tegucigalpa DC: IIES, 1961), pr. 75-84

sibilities. Nevertheless, only 34,134 hectares were irrigated in 1962 and at that time only about 800 hectares in the Comayagua Valley (a very important government project) on sub-family and family farms were under irrigation.[63]

The above paragraphs indicate, in a very general way, how the present land tenure structure of Honduras is not conducive to better farming practices. However, the slow progress in agricultural technology cannot be entirely blamed on tenure factors, but it is evident by what has been discused in this chapter, that it is a very important factor.

Income and its Distribution

At the present time, no study has been made of income distribution in Honduras. It could be argued that land distribution very closely approximates income distribution in the country. This is especially true in a predominantly rural society where the possession of land determines to a certain degree the welfare of people. On Chapter VII, the proposition was advanced that initial access to the income stream was determined by the control by individuals of factors of production other than their own labor. On this thesis, it can be assumed that in Honduras land distribution very much influences that initial access and it continous enjoyment.

Table XVI shows that the gross value of agricultural output per farm was 320 dollars for sub-family farms while for large farms it was 92,500 dollars and represented only 0.3 of the total number of farms. Multifamily farms received 46 percent of the gross value of agricultural output and represented only 9 percent of total farms. On the other hand, family and sub-family farms which composed 91 percent of total farms received 54 percent of gross income.

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[63]Comite Interamericano de Desarrollo Agropecuario, Inventario de la Informacion Basica para la Programacion del Desarrollo Agricola en Centro America, (Washington DC:PAU, 1965), p. 108.

The typical rural family income in Honduras is estimated at about 460 dollars annually. A survey carried out in the Departments of Choluteca and Francisco Morazan, indicated that sub-family and family owner operators had an annual income of 239 dollars and 537 dollars respectively. Sub-family operated by tenants and occupiers received an average annual income of about 125 dollars. Skilled and non-skilled workers on large farms earned 203 and 290 dollars a year. In contrast, owner-operators of medium and large multifamily farms received annual incomes of 4,957 and 34,927 dollars respectively.[64] Although not necessarily representative of the whole country it can be said that similar conditions prevail in other Departments of Honduras.

Social Conditions

There is no information about health, nutritional levels and housing by size of holding. Nevertheless, conditions described on Chapter VIII very well apply to sub-family and family farms as well as some multifamily farms.

Lack of technical knowledge and widespread illiteracy in rural areas is a difficult bottleneck for the adoption by farmers of new agricultural techniques and farm management practices.

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[64] Encuesta Socio-Economica en Zonas Agricolas Seleccionadas de los Paises Centro Americanos, p. 104.

CHAPTER XIII

CONCLUSIONS AND ALTERNATIVES

The foregoing chapters have tried to demonstrate the relationship between land tenure structures and agricultural and socio-economic development. This chapter will attempt to present in a very broad fashion some conclusions and alternatives for solving that problem in order to achieve a more rapid rate of economic and agricultural development.

The Hypothesis of the Study

The main hypothesis of this thesis, as presented on Part I, has been that land tenure structures prevaling in developing countries with special emphasis to Latin America, are an obstacle to agricultural and to economic development in general. For this reason, different types of agrarian reforms were analyzed in order to detect their effects on the determining factors of that development. On this basis, the case of Honduras was presented, hoping to further demonstrate how present land tenure structures, in that particular country, have adverse effects on its social and economic development especially the rural sector.

It must be remembered, however, that as any hypothesis, it needs to be tested empirically. Although ample evidence exists to support it, more investigation needs to be done at the farm level to further substantiate the relationships described.

With this in mind, a recapitulation of the principal characteristics of the Honduran land tenure structure are advanced.

Basis of Assertion

The following inferences can be drawn from the analysis of the agricultural sector and tenure structure of Honduras which tends to support the afore

mentioned hypothesis:

a) The majority of agricultural producers are minifundistas, that is, farmers working very small parcels of land. According to the classification adopted in this thesis, they are, either in units whose size is insufficient by itself to absorb the labor force available, or in holdings less than 10 hectares whose average size was 3.4 (in 1952) and 2.4 hectares (in 1965-66). About 75 percent of all agricultural producers are in this category. In addition to the excessive fragmentation and subdivision of farm units, the uneven distribution of land precludes the access of rural people to the land. This situation, as was pointed out in Chapter XII, brings about a poor utilization of land, labor and capital, very low levels of output per unit cultivated, limited technological change as well as low rural family income and deplorable social conditions.

b) Coupled with the smallness of farm units, insecurity of tenure is widespread. Only one third of all farms in Honduras are operated by owner cultivators, the rest is distributed among sharecroppers, occupiers, leaseholders and colonato. Under present types of tenure contracts, most of these producers are unable to introduce any conservation measures, crop rotation, or better farming practices. For example, only 25.7 percent of the total annual crop area was ploughed in 1952.

The paradox of land tenure institutions in Honduras, is that ownership of land is not necessarily conducive to better resource use or better farm management practices. Since most of the farm area under owner-operated farms is in units above 200 hectares, most of the land is left uncultivated, or dedicated to extensive grazing. As expected, land is underutilized in most large farms (latifundios) and over-intensified in family farms.

c) Chapter IX indicated the backwardness of the agricultural sector in Honduras. The productivity of labor is very low as well as that of land. Complemenatry measures, such as, credit, technical assistance, price support measures, etc., do not reach the majority of small producers in the country.

Farmer--co-operatives used in other countries for improving farmer's income, are few and small in Honduras. In 1963, there were only 16 co-operatives with 1000 members.

d) The present conditions of the agricultural sector and the inadequate system of land tenure do not offer very many opportunities for the improvement of rural people. Alternative employment is sought outside agriculture in manufacturing and services, but still 66 percent of the total labor force is employed in agriculture.

e) The disincentives created by an inefficient system of land tenure in regard to a better use of resources is complemented in Honduras, by a high degree of illiteracy and a low level of technical know-how of the rural population.

f) The gross agricultural product of the Honduran economy has been growing fair rapidly in recent years. Yet, such growth is attributed more to non-agricultural and non-food crop production. On the other hand, agriculture for domestic consumption, has been growing at about the same rate as population with a falling trend in food supply per capita and nutritional levels.

g) On the basis of FAO estimates about supply and demand for agricultural products in Latin America, it is assumed that between 1965-1975, with a population growth of 2.8 percent annually and of gross domestic income of 3.9 percent, demand for food and for all agricultural products will grow at rates of 3.2 and 3.1 percent respectively. In a country like Honduras with a 3.5 percent growth rate of population, and 5.3 percent rate of growth in gross do

mestic income, demand probably will exceed production, if agricultural output behaves as in the period 1952-1964 (3.2 percent), and it is likely that the country will be under pressure to increase the imports of farm commodities. This, of course, implies the need for a more dynamic and a more responsive agricultural sector.

h) Another important factor to be considered is that low incomes in rural areas and lack of transportation facilities have greatly reduced the size of the domestic market, which coupled with lagging agricultural output, has damped the country's rate of overall economic growth in the last 17 years. Greater integration of the rural population into the market economy through improved income distribution and higher productivity is a prerequisite for sustained economic development.

Alternatives for an Agrarian Reform Program

The obstacles to agricultural and economic development created in Honduras by an inadequate system of land tenure have been exposed at length. Nevertheless, they are not the only ones, a series of other factors do exist, that are also hampering agricultural development. Among them, insufficient agricultural infraestructure, inadequate credit facilities, a low level of technology and education, etc. Yet, they are mutually related in creating the vicious circle or underdevelopment.

The problem, therefore, is which obstacles must be attacked first in order to break down that vicious circle, so that, favorable conditions for agricultural as well as socio-economic development can be created.

At its present stage of economic development, Honduras can take two general courses:

1) To transform its agrarian structure in such a way that favorable con

ditions for agricultural and industrial development are built, or,

2) Stimulate industrialization (at the national level or in the Central American Common Market), letting agriculture adjust itself, or through the complementary measures, to the increasing demands imposed by industrialization. The former alternative seems more appropriate, given the existing agrarian structure.

The transformation of the agrarian structure is conceived in terms of altering the present systems of land tenure and distribution of land.

Under the present conditions, the following measures of agrarian reform are possible:

1) Land redistribution.

2) Consolidation of fragmented holdings.

3) Legal regulation of tenure forms.

4) Land settlement projects.

The Government of Honduras has already the legal means as well as the administrative apparatus to implement agrarian reform in the country. Also, it has an Agricultural Development Program (1965-69) which sets forth the objectives of agricultural policy and the instruments with which they can be attained.

Despite a general policy guidance and the basic elements to implement agrarian reform little has been done until 1967. The reasons can be stated as follows:

a) Failure on the part of Governments since 1962 to commit fully its energies to initiate a vigorous program of agrarian reform.

b) The National Agrarian Institute (INA) responsible for applying the Reform Law has been plagued by political and financial problems as well as insufficiency of well qualified personnel.

c) Except for the cadastral survey started by the Institute, some settlement projects and other related activities, the action of the INA has been very much restricted.

d) Until recently, very few technical studies about the possibilities of implementing agrarian reform in Honduras have been done. The land settlement project of the Aguan Valley and other studies started during 1967, are notable exceptions.

Notwithstanding, the INA is being reorganized, more projects are under study, external sources of finance seem to be available and a new orientation is underway.

The Nature of the Agrarian Reform Program

Any agrarian reform program must include measures that affect directly the form in which land is held.

As was described on Chapter X insecurity of tenure is prevalent in Honduras. The Agrarian Reform Law, on Articles 166, 167, 168, 169, 171, 172 and 173, contains clauses dealing with the regulation of tenancy contracts and eviction. However, it does not contain an explicit regulation for the duration of contracts but this should not constitute a difficult problem to overcome. The first step is toward increasing security of tenancy for the great majority of leaseholders, sharecroppers and occupiers. The Institute should revise, when possible, the terms of contracts, duration, conditions, etc., so that it could act according to what has been stipulated on the Law.

The Law, on Chapter XIX and XX, empowers the Institute through the use of the National Cadastral Survey and the National Agrarian Registration, with the revision, measurement and evaluation of land under any form of tenure. The Law should be enforced in situations where contracts violate the specific

clauses on tenancy relations and its general philosophy.

In those cases in which the farm size is too small, measures of consolidation and distribution must precede changes in the juridical relationship of the producer to the land.

A great amount of land in Honduras is held under the ejidal form of tenure. The limit which an ejidatario can have is 25 hectares. In those cases, which violate the Law, either because the size is too large, or the land has been sub-rented (sharecropper, colonato), or does not perform the social function of property, the Institute is authorized to request the restitution of those lands without any problem. The Institute, should grant ownership of ejidal land to those that have worked the land efficiently--except when the farm is too small.

The implementation of the Law for occupiers of national or ejidal land should be in accordance with Article 38 which recognizes the right of occupiers, as long as the land is worked according to the criteria of the Law.

In regard to owned-property, the reform should affect only those farmers classified as minifundio and latifundio.

Land Redistribution and Consolidation of Fragmented Holdings. Chapter X indicated that the minifundio and latifundio are widespread throughout the country. To devise a meaninful agrarian reform policy each region of the country should be examined closely:

Southwestern region or the Western Departments. The basic problem of this region, with the exception of the Departments of Copan and Santa Barbara, is its unfavorable land/man ratio. This has originated an agrarian structure characterized by a vast number of small farms (minifundios) and insecure tenancy conditions. Another grave problem facing this region, is the limited

agricultural land (only 15 percent of its total area), and the isolation in which it has been mantained for many years due to insufficient economic infra estructure. In view of these factors, the agrarian reform measures more appropiate to the region are the following:

a) When minifundios are located in potentially usable agricultural land, the consolidation of fragmented holdings should be the most appropiate agrarian reform measure since the limiting factor here for increasing output is land. In addition to creating owned-farms the government must devise co-operative forms of organization or communal types of tenure, (about 30% of farms are in ejidal lands), with some governmental supervision in order to improve their situation.

b) When farms (family farms) have enough land, but lack good farming practices or additional inputs, eg., capital, the government must provide mainly, credit, technical assistance, new inputs, etc.

c) In situations where too many small farms prevail (less than 1 hectare), some migration to sparsely populated areas should be encouraged or planned by the Government, in the form of settlement projects in the north and eastern parts of the country.

d) In the Departments of Copan, and Santa Barbara, where agricultural land is not limited, agrarian reform can be made in situ through land redistribution measures.

Southern region. The region is fairly well-endowed with agricultural resources, but has a high population density. Here, a distinction must be drawn between the Departments located in that region: Choluteca and Valle. In the former one, land concentration is high and, at the same time, minifundio is abundant. Furthermore, colonato and sharecropping are prevalent. The

key to the solution of agrarian structure in Choluteca is land redistribution, coupled with complementary measures for the new beneficiaries.

On the other hand, in the Department of Valle, similar solutions as those sought in the Southwestern Region should be tried.

Central region. It comprises the Departments of Comayagua and Francisco Morazan. In this part of the country, land redistribution is the best agrarian reform measure since land is relatively abundant and the limited access to land is hampered by land concentration. By the same token, the region is well-endowed with forest resources and the rational use of these resources can be achieved by some forestal settlement projects.

Northwestern and Eastern regions. With the notable exception of the Departments of Cortes, El Paraiso, and parts of Yoro, agricultural land is available and population density is low. There is a great deal of public or national land in these regions, so that, reform measures encounter less problems than in other areas of the country. A tremendous potential for moving agricultural producers from densely populated area exists. Nevertheless, a serious problem in these regions, especially the eastern one, is the total or partial absence of basic infraestructure (roads, storage facilities) and community services (schools, health centers, etc). Consequently, settlement projects, except when facilities exist, require large investments before new settlers can begin to work the land.

Most of the banana plantations are located in the northwestern region (Yoro, Cortes, and Atlantida). They posses large quantities of good agricultural land, but only cultivate a small proportion. Since the banana plantations as such are efficiently cultivated a large subdivision of land could bring a fall in production unless the size is maintained through a co-opera-

tive or collective form of organization.

Since the banana plantations have concessions of national and ejidal lands, the Institute is empowered to force the plantation owners to cultivate, when possible, a larger area with either the same crop or other profitable ones. In fact, Chapter VI of the Law, establishes a land tax to force owners of land to cultivate, sell or transfer idle land to the Institute. The INA can make use of this instrument in order to settle migrant producers or precarious occupiers or distribute land among small producer in the zone.

Other Considerations

The regionalization of the Agrarian Reform Institute's activities and the appropriate measures of agrarian reform envisaged here, require, not only an administrative reorganization, but additional financial resources. Chapter XIV of the Law aims at this regionalization, however, at the present time not much as been done. The main reason being a lack of funds. To achieve a large influx of funds; (1) larger budgetary appropiations are needed (at present they amount to only 1,000,000 dollars), (2) enforce the land tax, (3) Article 52 of the Law must be ammended, so that, the Institute is not compelled to pay all land expropriated, in cash, but by the use of Agrarian bonds as established on Article 65 and 66 of the Law, (4) to obtain additional funds either internally or through foreign aid.

Although the Law contains provisions on Chapter XV about water rights, a separate Law regulating the use of water must be enacted. This will come as a necessity as the Government of Honduras has large irrigation projects in preparation.

Any agrarian reform program, should not be divorced from other programs intended to improve productivity in agriculture. The Government of Honduras

has several programs to improve agricultural output. Among these, are:

1) Improved grain production and storage facilities program.

2) Program of agricultural diversifications.

3) Livestock improvement program, etc.

Such programs must be necessarily linked with a program of agrarian reform. Both are mutually related, and the success of one depends on the other. This is true not only from a production point of view, but also from the institutional one. It means that, the activities of the Agrarian Reform Institute must be closely coordinated with that of other agencies in charge of extension services, research, credit and supply of inputs, so that, the beneficiaries of the reform can convert their initial access to the income stream into realistic opportunities. In those programs, priorities must be given to small and medium size producers.

The abundance of forestal resources in Honduras, calls for some intelligent action in that direction. A pulp and paper plant is planned to be built on the northeastern part of Honduras, where as explained in Chapter VIII, population density is low. The possibilities for settling producers from densely populated areas on this region, can be geared toward creating forestal resource use farms, either individually or on a co-operative basis.

In this regard, the Institute should rely more on establishing a diversity of tenure forms. It should not concentrate its efforts, only in creating family owner operated farms, but devising other tenure relations according to specific conditions. This, of course, demands on the part of the Institute, the initiation of technical studies in selected areas to determine the most appropriate tenure forms. Such proposal would give more flexibility to the tenure system in Honduras as the conditions of the agricultural sector

change with socio-economic development.

In addition to purely technical and economic desiderata, education and community development programs must be connected with any agrarian reform program. As it was the case with increased productivity, greater rural welfare is dependent on the interrelationships between measures to alleviate social conditions and agrarian reform as such.

Finally, the Institute should promote and give its support to other forms of human organization. For example, agricultural trade unions and peasant organizations can help to stimulate the peasant's desires to colaborate in the execution of agrarian reform and accept more easily measures intended to improve their social and economic position.

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AGRARIAN REFORM AND AGRICULTURAL DEVELOPMENT: THE CASE OF HONDURAS

by

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ABSTRACT

The objectives of the study were to analyze the possible effects of agrarian reform on agricultural development and to determine, in the case of Honduras, how land tenure structures are hampering its economic development as well as to recommend appropriate agrarian reform measures to correct that situation.

As introductory material, a general background about the meaning of land tenure and agrarian reform was given, so as to link it with an analysis of the contribution of agriculture to economic development. In analysing the factors that determine agricultural development, it was established that agrarian reforms, by transforming inadequate systems of land tenure, can provide not only the necessary conditions for technological innovations in agriculture, but also the possibilities of allocating resources more efficiently. In addition, agrarian reforms have a direct impact upon capital formation through the incentives they furnish to producers, but also by increasing income expectations and creating favorable conditions for the absorption of credit.

The traditional agrarian structures prevailing in most developing countries are conducive to low levels of employment. Agrarian reforms, by changing the nature of tenure patterns, the size and structure of farm units and the type of technological change and output that may be introduced, can create favorable conditions for increasing employment opportunities in rural areas.

Agrarian reform affects income distribution in agriculture by providing to farmers accessibility to the annual income stream of the economy and maintaining the security of such access. Once rural incomes have been improved

either hy the redistribution of income or increased productivity, it has ramifying effects on the whole economic system especially in relation to the transfer of capital and industrialization.

Having analyzed the contrihution of agrarian reform to development, the second part of the thesis deals with a broad description of the natural and human resources of Honduras.

The rural population of Honduras lives in areas where potentially usahle agricultural land is scarce. Most of the lahor force is young and works in agriculture. Illiteracy is widespread; health and housing conditions are generally poor; nutritional levels are low, and in contrast to other developing countries, social mohility is generally high.

The economy of Honduras essentially depends on agriculture. The agricultural sector provides more than one-third of gross domestic product, employs two-thirds of the lahor force and generates nearly 90 percent of exports. However, agriculture has not heen a very dynamic sector in the econo my hecause of low levels of output and productivity.

One of the factors responsihle for the situation is the land tenure structure of the country. The most striking feature of these tenure relations is the concentration of land ownership in relatively few large units and the vast number of very small farms (minifundios) at the other end of the scale. In addition to the uneven distribution of land, insecurity of tenure is also widespread especially among small producers. In fact, owner-operated farms constitute less than one-third of the total numher of farms in the country.

The adverse effects of these systems of land tenure on the development of Honduras, are manifested in a poorly utilization of land, unemployment and underemployment of the lahor force, limited use of capital, lack of better

farm methods of production, deplorable social conditions and inequality in the distribution of rural income.

Since land tenure structures are an obstacle to the social and economic development of agriculture and the economy of Honduras, their transformation by different agrarian reform measures signifies a step forward in the acceleration of development of the Honduran economy.