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(100) Thiesenhusen, W.C.; Brown, M.R.  
(101) Wis. Univ. Land Tenure Center

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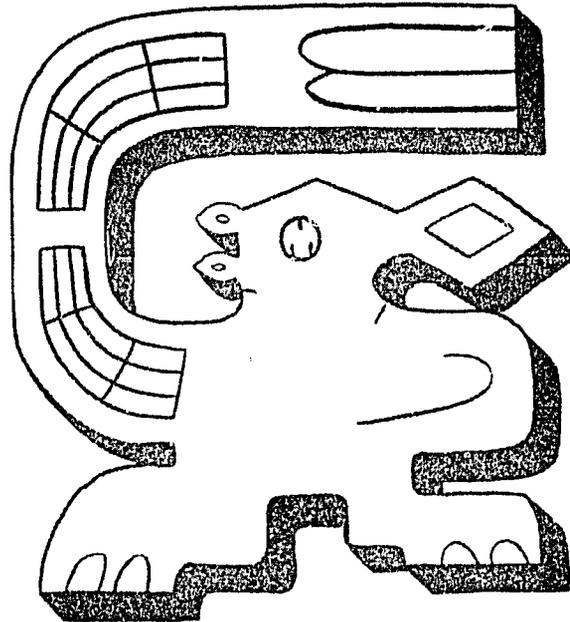
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# Survey of the Alliance for Progress: Problems of Agriculture

William Thiesenhusen and Marion Brown

LAND TENURE CENTER

University of Wisconsin  
Madison, Wisconsin 53706



90th Congress }  
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COMMITTEE PRINT

SURVEY OF THE ALLIANCE FOR PROGRESS

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PROBLEMS OF AGRICULTURE

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A STUDY

PREPARED AT THE REQUEST OF THE  
SUBCOMMITTEE ON AMERICAN REPUBLICS AFFAIRS  
OF THE  
COMMITTEE ON FOREIGN RELATIONS  
UNITED STATES SENATE



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## FOREWORD

This is one of a series of studies prepared for the Subcommittee on American Republics Affairs of the Committee on Foreign Relations as part of the subcommittee's broad survey of the Alliance for Progress. This survey was undertaken in the spring of 1967 in an effort to determine where the Alliance stands after 6 years and what, if any, changes are indicated in U.S. policies.

This study, which deals with the problems of agricultural modernization and land reform in Latin America, was prepared by Profs. William C. Thiesenhusen and Marion R. Brown of the University of Wisconsin. It is published at this time solely as the basis for discussion and further inquiry. The points of view expressed do not necessarily reflect the opinions of the subcommittee or any member thereof.

On behalf of the subcommittee, I wish to take this opportunity to express our appreciation to Professors Thiesenhusen and Brown and their colleagues at the Land Tenure Center of the University of Wisconsin for their willingness to undertake this work and for the contribution which they have made to illuminating some very complex issues.

WAYNE MORSE,  
*Chairman, Subcommittee on American Republics Affairs.*

## LETTER OF TRANSMITTAL

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1 AGRICULTURAL HALL,  
UNIVERSITY OF WISCONSIN,  
*Madison, Wis., August 25, 1967.*

SENATOR WAYNE MORSE,  
*U.S. Senate,*  
*Washington, D.C.*

DEAR SENATOR MORSE: Enclosed is the document regarding U.S. policy vis-à-vis Latin American agriculture which we were asked to prepare for the Senate Committee on Foreign Relations.

You realize, of course, that the report represents the work and ideas of many people besides ourselves. We have tried to reflect this by representing our role as one of preparation rather than authorship. In particular, we have drawn heavily on the research and experience of University of Wisconsin professors, Jacob H. Beuscher, Peter Dorner, Don Kanel, Bryant E. Kearl, Kenneth H. Parsons, and Raymond J. Penn. We must emphasize, however, that we alone are responsible for any misinterpretations, or other errors that appear in the document.

Working on this document has been a very pleasant experience and we greatly appreciate having had the opportunity. We sincerely hope that the report proves to be useful to the committee.

Sincerely,

WILLIAM C. THIESENHUSEN,  
*Assistant Professor of Agricultural Economics.*  
MARION R. BROWN,  
*Assistant Professor of Agricultural Journalism.*

**SURVEY OF THE ALLIANCE FOR PROGRESS**  
**PROBLEMS OF AGRICULTURE**

SUMMARY

Food production in Latin America has until recently kept slightly ahead of population growth. Food imports are increasing, and foreign exchange which could otherwise be used for industrialization buys agricultural products instead. Yet the low-income groups which make up a majority of Latin America's population have actually experienced a decrease in per capita food supply because of inflation and the disproportionate rise in middle and upper incomes.

Permanent increases in Latin America's food supply are not likely in the short run. The costs of bringing new lands into production are increasing as suitable unused land becomes more scarce. Little is known about unused lands, and with study they are often found to be neither as vacant nor as productive as supposed. Concessionary food supplies from developed nations can provide only short-term relief. Higher crop yields from land already under the plow will require improved technology which cannot easily be transferred from other countries and whose acquisition locally is a long, slow process.

Low productivity is only part of the farm problem in Latin America. Latin American agriculture is characterized by concentration of productive resources in the hands of people who have not generally demonstrated a desire to maximize agricultural production. Rural economic and social institutions have been shaped by these resource owners themselves through governments in which they have traditionally had a controlling voice. The existing system has not generated necessary increases in production for urban and export markets, nor has it bettered the living standards of the farm work force.

Meanwhile, the rural labor force is growing in spite of increasing migration to urban centers. The rural masses lack bargaining power. There is increasing political activity in the countryside, growing incidence of civil disobedience, and a resulting disorganization not conducive to capital investment or productivity.

At the same time mechanization of agriculture has been replacing farmworkers and speeding rural-to-urban migration. Thus many rural-to-urban migrants are unemployed or underemployed. With other low-income groups in urban areas they form a growing political force which brings pressure on governments for welfare programs that meet short-range goals without changing the underlying conditions that govern the future.

Solving problems of agricultural production will not automatically overcome this tangle of economic and social ills.

It is at least theoretically possible to increase agricultural production without major changes in the existing institutional and income distribution matrix. "Efficient" plantation agriculture, for example, might well be accompanied by actual deterioration in income, employ-

ment, and living standards of rural people. Furthermore, if increased production is achieved without increased benefit to the disadvantaged rural majority, its gains may be swallowed up by political instability and civil disorder.

Urban industrialization will be important in the longrun solution, but Latin American industry cannot yet absorb very much rural labor. For a long time, very large numbers of people will need to make their living from agriculture. The present need is for policies and programs (including land reform) which generate more rural employment and income security with strong bargaining power or secure tenure on the land.

The land reform experiences of Mexico, Bolivia, and Venezuela carry lessons for other Latin American countries. None of these can be taken as an ideal model, but they demonstrate the utility of encouraging each country to develop a program to suit its situation, resources, and needs.

### I. INTRODUCTION

There appears to be an increasing tendency for U.S. policymakers to think of the Latin American farm problem as one of mere shortage of food, and consequently to devise policies to increase food production through improved technology without much attention to the consequences for food distribution or more particularly for the employment and income positions of rural people.

Whereas the original charter of the Alliance for Progress stressed the need for institutional reforms in rural Latin America, the emphasis has more recently shifted to modernization of agriculture without special concern for structural change.

This increasingly narrow focus stems in part from the fact that low farm productivity in Latin America creates very real and immediate problems for U.S. policy. Low rates of increase in production and exports, together with rising imports, depress foreign exchange earnings and revenues from export taxes; importation of capital goods becomes more difficult; development programs are harder to finance; foreign debt commitments are more difficult to meet; capital flight and inflation increase. These are immediate and almost preoccupying issues for Latin American governments (and for the United States as well in its attempts to support development programs and cover budget deficiencies in many of these countries).

Food scarcity in city markets adds to the pressure. High food prices to urban consumers—especially to the highly visible and increasingly organized urban poor—are politically explosive.

The fact that foreign aid funds are subject to annual renewal adds still more pressure to seek quick and dramatic gains in marketed food supplies.

These immediate shortrun pressures for more food in urban and export markets tend to overwhelm and dominate the attention of Latin American and U.S. policymakers alike.

The concern for productivity per se is further heightened by the fact that food supplies are typically (and most easily) measured in city and seaport market channels. Agricultural products that are processed and used on the farm are not always counted.

All of these issues, together with the popular myth that rural people are always able to feed themselves, lead many policymakers to conclude

that the main test of effectiveness of a program to modernize agriculture is how much food it delivers to the cities or the world markets. The success they aim for is almost entirely measurable in visible increases in the marketable portion of agricultural output. Policies and programs appropriate to this goal are primarily concerned with changing the physical and technical aspects of farming on larger farm units where quick, dramatic gains are theoretically possible through the introduction of machines, hybrids, fertilizer, irrigation, and protective chemicals.

These measures are tremendously important. They offer the very real hope of large gains in production. However, a narrow concern for production in response to urban and foreign exchange needs diverts attention from the revolutionary changes that are taking place in rural Latin America. The outcome of Spanish and Portuguese conquest and 150 years of independent rule by landed elites is a deeply divided and disturbed rural society, with millions of small holders and landless peasants separated culturally, politically, racially, and sometimes linguistically, from the *hacendados* who control the land.

It is well to remember that the world food problem is not yet one of deficient global supply. There is enough food in the world to meet the calculated minimum nutritional needs of the entire population. If existing food supplies were evenly distributed there would not yet be a world food problem.<sup>1</sup> This fact does not lessen the urgent need for increased production. It does, however, point up the importance of the distributional aspects of the present crisis and it belies the notion that the problem can be solved by focusing exclusively on increasing production.

The distribution issue is not merely a matter of uneven distribution among countries, but more importantly a matter of unequal accessibility among the regions, groups, and families within countries. In many underdeveloped countries "the poorest 25 percent of the people consume diets with caloric and protein contents that are only about three-fourths of the country average".<sup>2</sup> Nowhere else in the world are these inequalities greater or potentially more explosive than in rural Latin America.

Large per capita increases in food supplies—as measured in urban and export markets—would, if accompanied by lower food prices, benefit some presently disadvantaged urban groups. But this would be true for the equally disadvantaged rural population only if special efforts were made to increase the size and the security of their claim on the national agricultural product. Attention to matters of food distribution, rural employment, and income, calls for quite different policies than would be required to increase production per se. It raises such important questions as where, by whom, and for whom production increases are sought. It introduces a range of nontechnical, sociopolitical, and institutional issues that are complex, hard to analyze, difficult to deal with, and consequently, easy to ignore. Thus, it is tempting to confine our efforts to straightforward and noncontroversial measures such as technological improvement of large commercial farms. However, we must be wary of any approach that concentrates so narrowly on commercial production that it ignores large numbers of rural

<sup>1</sup> The White House, "The World Food Problem," a report of the President's Science Advisory Committee, vol. 1, report of the Panel on The World Food Supply, U.S. Government Printing Office, Washington, D.C. May 1967, p. 11.

<sup>2</sup> *Ibid.* pp. 11-12.

people. The rural poor are less visible and less organized than impoverished city slum dwellers. Yet in most countries they are more numerous than the urban poor, they are continuing to increase in numbers, and their misery is becoming steadily more acute. In most of Latin America there is no practical way for the laborer to share in production gains on the land he works. It is unrealistic to expect him to undertake measures that will yield more food when he has little voice in decisions and little chance to benefit from such measures.

It is imperative, then, that we incorporate rural income and employment issues into our concept of modern agriculture. In our efforts to help modernize Latin American agriculture, we should seek not only to increase the supply but also to improve the distribution of food. It is in conformity with this formulation of the world food issue that we have prepared the following report on the agricultural situation in Latin America.

In the report we first deal briefly with matters of food supply and demand including some of the difficulties involved in achieving and measuring production increases. These issues are quite straightforward, and as we noted earlier, have already become the object of a great deal of concern. The main burden of our report is to draw attention to less obvious and more complex aspects of the Latin American farm problem: rural employment, income, and accompanying institutional issues, including especially patterns of resource ownership, land management, and labor relationships. After describing the general situation, we attempt to formulate U.S. policy alternatives for encouraging agricultural modernization in Latin America. A discussion of relevant aspects of the land reform experiences of Mexico, Bolivia, and Venezuela is attached as an appendix.

## II. THE FOOD SUPPLY IN LATIN AMERICA

### A. AGRICULTURAL PRODUCTION AND NUTRITION

Production of food per capita in Latin American rose only slightly during the past decade.

The United Nations Food and Agriculture Organization estimates that available food supplies increased by 28 percent from 1955 to 1964. Concurrently, population grew by 27 percent, leaving a per capita rise over a decade of only 1 percent in available food.

Data of the U.S. Department of Agriculture show that per capita agricultural output (including nonfood products) leveled off in the early 1960's at a point slightly above the 1955-59 average. Production per capita rose sharply in 1965 but preliminary estimates indicate that it slumped below the 1955-59 average in 1966.

Before World War II, agricultural production (food and fiber) in Latin America was 5 to 10 percent per capita higher than in 1965-66.

Daily per capita calorie consumption in Latin America (excepting Argentina) ranged from 2,710 in Brazil to 1,780 in Haiti in 1959, 1960, and 1961. There is little evidence of improvement up to 1964. Per capita calorie consumption in Argentina (3,220) was similar to that in North America.

Protein consumption averages about one-third lower in Latin America than in the United States. In 1958, Latin America averaged 29 percent below standard minimum calorie levels set by the USDA's

world food budget. Thirteen Latin American countries had deficient per capita protein supplies, and eight registered substandard per capita fat supply levels.

#### B. AGRICULTURAL EXPORTS AND IMPORTS

Latin America has traditionally exported agricultural products to provide foreign exchange, both to service and repay external debt and to import goods and services needed for industrial development. In the decade ending in 1964 the volume of agricultural exports increased by 40 percent. Falling prices reduced the value of this increase to a gain of only 7 percent in export earnings. In other words, although volume averaged an annual increase of about 4 percent, values increased by less than 1 percent per year. An FAO study concludes that when changes in the terms of trade are taken into consideration, there was probably no rise in purchasing power over the decade as a result of the increased value of agricultural exports.

From the midfifties to the midsixties, Latin American agricultural export earnings fluctuated at a level between \$3 and \$4 billion a year, but they represented a progressively smaller share of total export value: 48 percent of the total in 1955 and 35 percent in 1965.

Nearly all agricultural exports from Latin America face uncertain futures. Speaking generally, world consumption of the agricultural crops which Latin America is able to produce is growing sluggishly and prices are weakening. In the coming decade, the export markets with the most promising growth potential for Latin American agricultural products will probably be for feed grains, oilseeds, meat, and fresh fruit and vegetables (which may reach the North American market in winter). It is uncertain how common market developments will affect export demand for agricultural products.

The volume of agricultural imports to Latin America from all sources increased fairly rapidly from 1948 to 1960 and levelled off in 1960-62, showing an annual rate of increase of about 2 percent over the period. The value of agricultural imports increased much more slowly, or at a rate of about 0.75 percent a year. This rate of increase of importation was below the rate of population growth. Brazil, however, increased her agricultural imports (including sales under Public Law 480) by 40 percent in the period from 1958 to 1963. Other countries which show a persistent upward trend in agricultural imports are Uruguay, Argentina, Chile, Venezuela, Ecuador, and the entire Central American region.<sup>3</sup>

Latin America's standing in world wheat and feed grain trade has deteriorated markedly, moving from net exports of nearly 2 million tons of grain annually in the late 1930's to net imports of just over 2 million tons in 1960-61.<sup>4</sup>

The annual value of agricultural imports from outside the region is currently running at about \$600 million, about 40 percent of which comes from the United States.

Cereals accounted for 36 percent of all agricultural imports from 1934 to 1960. The second most important category has been livestock,

<sup>3</sup> Montague Yudelman, "Agriculture Development in Latin America: Current Status and Prospects", Inter-American Development Bank, 1960, mimeographed, pp. 26-30.

<sup>4</sup> Lester B. Brown, "Man, Land, and Food", Foreign Agricultural Economic Report No. 11, United States Department of Agriculture, Economic Research Service, Regional Analysis Division, November 1963, pp. 63, 78.

meat, and milk products. While total agricultural imports doubled between 1934 and 1960 (at constant prices), animal product imports tripled. The obvious effect of rising imports is to force governments to use foreign exchange for food that, if it were grown at home, would release dollars to service foreign debts and to bring in products needed for development and for which the region does not have a comparative advantage.

#### C. LIMITATIONS OF PRODUCTION DATA

These sweeping statements, based on aggregate data, mask a great deal of the complete picture.

Aggregate output data hide changes in the composition of the farm product. For example, some countries, especially in Central America, have expanded agricultural exports at the expense of production for domestic consumption, which means that per capita domestic food supply declined while total farm output increased.

Perhaps more importantly, aggregate figures mask marked variations among countries and among areas and socioeconomic groups within countries. In Brazil, Ecuador, El Salvador, Mexico, Panama, Peru, and Venezuela the gross agricultural product increased at least 1 percent faster than the population in the decade prior to 1963. In most of the 13 remaining Latin American countries population growth equalled or exceeded production increases. Furthermore, declining food supplies available to certain areas or socioeconomic segments of a country's population are obscured in the aggregate by rising food supplies available to others.

It should also be noted that the aggregate statistics themselves are of dubious precision. Import and export data are probably fairly accurate, as are data gathered by central government purchasing agencies. However, changes in food production and consumption in rural areas outside the market economy are impossible to measure in precise fashion. Then, too, as countries become more urbanized, more food tends to move through commercial channels. This suggests that slight gains in production as shown by statistics may really only reflect increases in the produce going through channels where records are kept or estimates made. Where this occurs, what seems to be a gain is probably actually a transfer made at the expense of low-income rural families. In fact food supplies available to lower income groups—the bulk of the population in Latin American countries—seem to be declining steadily as a result of inflation and rising incomes in upper income groups.

#### D. THE RISING DEMAND FOR FOOD

Inaccuracies and other caveats aside, Latin America's farm problem is severe. Population is growing at least as fast as in any other region of the world. Assuming a 2.8 percent population growth (approximately the rate over the past decade), the present population of Latin America will triple by the year 2000. The rate varies by country, ranging from about 1.3 percent in Uruguay to 4.2 percent (the highest for any nation) in Costa Rica.

Birth rates usually fall as incomes rise, urbanization proceeds, life expectancy increases, and infant mortality drops—in short, as a country modernizes over the long run. Current birth rates in Latin

America exceed 40 per 1,000, while in developed countries the rate is below 25 per 1,000. Attempts to limit family size will not likely be successful in bringing population growth in line with food supplies over the short run. However, it is becoming increasingly clear that if present growth rates continue over the long run, population pressures will doom all efforts to achieve food balance, by whatever means.

Food production will not only have to keep up with large population increases, but also to satisfy the new demands for more and better food that result from rising incomes. Otherwise, imports will continue to increase as income rises. Capital goods necessary for industrialization will be barred and/or repayment of outstanding loans will be delayed and/or extreme balance-of-payments problems will be experienced. Certainly, this process will be accompanied by inflationary pressures, and, in general, development will be impaired. The sequence can be mitigated in the short run to the extent that increased food supplies are available on soft terms from developed countries.

### III. PROSPECTS FOR INCREASED PRODUCTION

#### A. EXPANSION OF THE FARM LAND BASE

In the past 10 years almost two-thirds of the increased agricultural product in Latin America has come from pressing more land into production. This kind of expansion probably cannot continue for long. Arable but unused lands are neither as extensive nor as idle as sometimes calculated. And the costs of reclaiming them are increasing. Attempts to farm unoccupied tropical areas have resulted in less-than-hoped-for output. Much of Amazonia and other jungle areas, for example, have proved to be less productive than was once expected. Recent evidence seems to throw doubt on the potential of many such areas. It is now fairly well (but not universally) accepted that the major part of the sizable Petén area in Guatemala, for example, cannot support much cropping. Speaking generally, "new lands" policies face high costs and very uncertain returns.

Furthermore, the most promising new lands are not always as "available" as they seem. In some very populous Central American countries (Costa Rica, Honduras, Nicaragua, and Guatemala) where ample idle public lands were presumed to exist, recent surveys indicate that large numbers of squatters have staked out plots and are already farming. These pioneers often move from developed areas as export crops expand and commercial farms mechanize.<sup>5</sup> Some expansion of agricultural land is possible, but it will be extremely costly, and cannot be sustained indefinitely. In 5 to 10 years, given the current rates of population growth and migration, there will be no remaining frontier in Central America. Speaking more generally, it is unrealistic to assume that unused lands can long provide an economically viable "safety valve."

#### B. EXPANSION AT THE "INTENSIVE MARGIN"

If the Latin American nations are to increase their food supplies substantially in the foreseeable future, they will have to expand agriculture "at the intensive margin," exploiting presently occupied land more productively through the use of fertilizers, protective chemicals,

<sup>5</sup> Kenneth H. Parsons, "The Orientation of Research in Agricultural Development and Land Tenure Policy in Central America, A Field Report," Madison, Wisconsin, January 1967, mimeographed.

hybrid seeds, and improved breeding stock. FAO technicians have reported that in Latin America "resources are unquestionably ample, without approaching their full utilization, to meet the estimated increase required".<sup>6</sup> However, farming techniques will have to change radically. To date only Mexico has shown marked progress in crop yields (they rose 50 percent during the 1950's). This has been primarily because of improved irrigation facilities, but also because of fertilizer and improved seeds.

In general, yields are low throughout Latin America. Average production per acre of corn, rye, oats, barley, potatoes, and cotton is below world averages. Of 24 agricultural products recently studied by the Economic Commission for Latin America, only six showed an increase in yield of more than 10 percent between 1948 and 1959. Ten products showed gains of from zero to 10 percent, while eight remained stationary or decreased. There are, of course, important country differences. Average Mexican wheat yields are higher than those in the United States, for example. Brazil's crop yield position does not compare well with those of Argentina, Chile, and Mexico, either in absolute terms or with respect to improvement in recent years.

It is widely agreed that one crucial component of agricultural modernization in Latin America will be agricultural research experiment stations decentralized to ecological zones. Extension activities will also have to be greatly stepped up. Stable and favorable input-product price ratios are necessary to stimulate sustained investment. Cost-price ratios may need to be altered in favor of the farmer. Industries which provide agriculture with services and supplies must become more productive and competitive so that lower costs accrue to the farmer. Availability of inputs and services at appropriate times in the growing season is also a central issue. Research on improved varieties results in plants that are increasingly sensitive and responsive to environmental changes; but without an accompanying "package" of inputs to control the environment, new varieties often yield less than the strains they replace.

The United States had developed an adequate technical "package" and achieved rapid yield per acre increases by about 1940. Since that time, surpluses have often made it necessary to reverse gears through acreage allotments, conservation reserves, commodity storage, et cetera. But we should remember that it took decades to set the stage for this productivity revolution in the United States. Jeffersonian political philosophy led us into a freehold land tenure system and resulted in a large agrarian middle class. Successive Congresses with strong rural representation appropriated funds for the needs of the countryside. By the time our frontier closed and intensive farming became necessary we had a backlog of agricultural research results, well-developed State and local governments, an active extension service, widespread literacy, and well-established communications networks (including rural free delivery). Furthermore, industrialization was well along and our population was growing slowly as compared with Latin America's present rate. Even with land-extensive techniques we had farm surpluses by the 1920's.

<sup>6</sup> Simon Kuznets, "Economic Capacity and Population Growth." Unpublished paper presented at the Conference on World Population Problems, Graduate School of Business, Indiana University, May 3-6, 1967, mimeographed.

## IV. WHY IS LATIN AMERICA DIFFERENT?

## A. THE NEED FOR RURAL JOBS

Most countries in Latin America must make the switch to intensive agriculture in a much different context. Unlike the United States during its drive toward agricultural modernity, Latin America's rural population is still growing by about 1.6 percent annually. (In the United States, rural population had already begun to decrease by about 1920.) In 1960, about 47 percent of the work force in Latin America was engaged in agriculture (ranging from about 20 percent in Argentina to 60 and 70 percent in Ecuador and Central America and perhaps 90 percent in Haiti); another 10 percent was engaged in supplying inputs to agriculture or services to farmers. Thus any programs designed to modernize agriculture and increase production in Latin America will have to take into account the employment and income needs of a large and increasing rural population.

Increased employment in urban areas is often discussed as an alternative to land reform and other efforts to promote employment or income security in rural areas. Latin American industry does employ more people now than it did a decade ago, but the increase in employment is insufficient to absorb urban population growth and migration from rural areas. Since Latin American industry is still small, even large percentage increases would generate few jobs in the short run. Also, to the extent that factories replace small artisan shops, first blushes of industrialization tend to displace labor.<sup>7</sup> In Russia, Japan, Western Europe, and the United States, industrialization was well along before it absorbed labor on a large scale. Latin American cities are already attracting many more people than their industries can employ. As industrialization proceeds, it will draw first on this large reservoir of urban underemployed rather than pulling more workers out of agriculture.

Thus increased migration to the cities is not yet a viable alternative to increased rural employment. It is estimated that between 4 and 5 million families already live in the shantytown slums that surround many cities in Latin America. Where industrial growth is fairly rapid (Buenos Aires, São Paulo), or where people have a more secure subsistence on the land (Bolivia), or where both factors combine (Mexico), the problem is less exaggerated. But the shantytown population of Lima grew from 10 percent of its total population in 1958 to 20 percent in 1964. In 1960, Rio de Janeiro's "favela" population was growing three to four times as fast as the city as a whole. Despite increased public housing, the shantytown population of Santiago, Caracas, and Bogotá is growing faster than the rest of the city.

Services are seldom provided in any meaningful way to these areas, since city budgets are small and already strained. The income gap between rich and poor becomes etched in sharper relief on the minds of the new settlers. Soon they may be even less satisfied than they were on the farm. Most do not—perhaps cannot—return to rural areas. They become increasingly involved in political action which partially substitutes for the former primary associations with kin and close neighbor groups, and rapidly develops the potential for violence.

<sup>7</sup> Gunnar Myrdal, "The United Nations, Agriculture, and the World Economic Revolution," *The Journal of Farm Economics*, Vol. 47, No. 4, November 1965, pp. 889-899.

Substantial public investments became absolutely necessary to provide even minimally acceptable living conditions in these areas.

Providing more jobs at the farm level would not solve the city problem. These slums will continue to grow no matter what policies are followed. But they will grow faster unless attempts are made to create rural employment opportunities. This will also require public investments, but most of these will be of the type that tend to increase production whereas antislum investments in the cities go primarily for improved living conditions (housing units, sewers, water supplies). In the countryside, investments can be primarily for land, roads, irrigation, fertilizers, hybrid seed, and other reproducible capital.

Not all capital is of equal priority in rural Latin America. Capital which increases yields per acre (fertilizers, improved breeding stock, hybrid seeds) must take precedence over most machines which are primarily laborsaving. A strategy which encourages rapid substitution of agricultural machinery for farm labor will increase joblessness and migration. We need to be constantly aware of the fact that the manner in which increased production is achieved and the number of people who are able to participate and reap some benefits from the experience may be as important as the production increase itself.

Premature mechanization of agriculture not only releases labor that has no place to go, it also uses scarce foreign exchange that would otherwise be available to equip urban industry more adequately, and thus, over the long run, increase rather than decrease employment. It is becoming clear from Mexico's *ejido* experience that large increases in production are sometimes possible from applying more labor to the land and increasing the proportion of labor-intensive high-value crops. In Mexico, gains on labor-intensive small farms have been approximately equal to gains on larger and more mechanized units. And because these gains were achieved with labor that had no opportunities outside agriculture, they were cheaper than the increases achieved with imported inputs and machines on large farms.

To reemphasize our point, agricultural modernization policies should attempt to employ rural people more productively where they are, rather than allowing them to be displaced by labor-saving technology. To do this it will be necessary to do more than encourage growth within the given structure. The task will necessarily involve institutional and structural reforms.

#### B. THE NEED FOR INSTITUTIONAL CHANGE

Institutions are less amenable to measurement than other variables which contribute to agricultural modernization; hence they are often neglected by scholars and planners alike. This does not mean they can be safely ignored or that they are exogenous to the agricultural development process. Institutions affect incentives to produce, income distribution, and opportunities for employment. They influence the actions of individuals, furnish the procedures for resolving conflicts between them, and provide the matrix within which productivity will be increased. They largely determine where, when, by whom, and for whom production increases will be sought.

Largely because of institutional patterns, the tools of economics are insufficient to explain the complex process of development. As Prof. Robert L. Heilbroner explains:

\* \* \* the process called 'economic development' is not primarily economic at all. We think of development as a campaign of production to be fought with budgets and monetary policies and measured with indices of output and income. But the development process is much wider and deeper than can be indicated by such statistics. To be sure, in the end what is hoped for is a tremendous rise in output. But this will not come to pass until a series of tasks, at once cruder and more delicate, simpler and infinitely more difficult, has been commenced and carried along a certain distance.

In \* \* \* Latin America, the principal handicap to development is not an absence of national identity or the presence of suffocating cultures (although the latter certainly plays its part), but the cramping and crippling inhibitions of obsolete social institutions and reactionary social classes. Where landholding rather than industrial activity is still the basis for social and economic power, and where land is held essentially in fiefdoms rather than as productive real estate, it is not surprising that so much of society retains a medieval cast.

Thus, development is much more than a matter of encouraging economic growth within a given social structure. It is rather the *modernization* of that structure, a process of ideational, social, economic, and political change that requires the remaking of society in its more intimate as well as its most public attributes.<sup>8</sup>

#### C. LAND TENURE, FARM MANAGEMENT, AND LABOR RELATIONS

Unlike the United States, in which liberal land policies long ago established family farms, most Alliance countries in Latin America (except Bolivia and Mexico) are characterized by a land ownership pattern which includes a few large estates (*latifundia*), plantations, and large numbers of landless workers or operators of very small units (*minifundia*).

Small farms in Latin America are typically managed in a fairly routine fashion with traditional technology though there is evidence that in many countries of Latin America production per acre on small farms is as great as or greater than that on large ones. Returns to labor vary a great deal among small farmers, and probably average below the wage levels on large farms. However, total family income including returns to land and capital is probably higher for most *minifundistas* than for wage laborers.

From 5 to 10 percent of the landowners in Latin America control from 70 to 90 percent of the agricultural land. Latin America's *haciendas* and plantations are largely a legacy of the colonial period when lands were granted in large tracts.

Some large farms have come into the hands of more active owners. Actively managed large-scale agriculture also exists on plantations and new commercial farms (cotton in Central America and Colombia, rice and other food crops in Colombia, etc.). Close study of these apparently modern and progressive farms in Latin America often shows that they are not as well farmed as they at first appear. Modern machinery is sometimes used to replace labor rather than to increase yields. Purebred cattle often graze on unimproved pastures. Scarce irrigation water is frequently used on low-value crops. Still it is this group of farms (and no one can say how large it is) that offers the greatest promise for shortrun gains in marketable and exportable surpluses.

<sup>8</sup> Robert L. Heilbroner, "Counterrevolutionary America." *Commentary*, April 1967, pp. 31, 32.

However, most of Latin America's large farms are of the traditional type with absentee ownership, extensive land use, unchanging technology, and minimum cash expenditures. They are characterized by hired low-grade routine management, traditional organization which largely runs itself, and semifeudal labor arrangements (small cash wages supplemented with usufruct exchanged for labor obligations). Since jobs are scarce, labor has few alternatives but to seek employment on the large farms and plantations. Farm laborers have virtually no chance of acquiring land of their own through the normal operation of the market. Land prices are high because land is a commodity which: (1) bears social prestige; (2) acts as a hedge against inflation; (3) brings accompanying control over labor. This is especially true in the Andean countries, except Bolivia.

Work contracts are infrequent even though laws are on the books which require them. Rural labor is largely unorganized (except in Venezuela, Bolivia, and Mexico, and to a lesser extent in Brazil and Chile); legislation restricting unionization of agricultural labor is still effective in most Latin American countries. Thus, workers have little or no bargaining power and protective legislation is seldom enforced.

As a result, rural workers have benefited little, if at all, from the recent slight economic growth of many Latin American countries. In fact, some research has noted a persistent decline in real income, especially cash wages. It has been calculated that 50 percent of the cash income of Latin American farm workers is spent on food. (Laborers are often paid partly in kind, which protects part of their income from the effects of inflation but which also makes them more dependent on the landowner than they would be in a cash wage situation. In some countries farm workers are paid virtually no cash wage, getting almost all of their pay in kind. A recent study of Ecuador shows the cash wage to be about 15 cents a day.)

In Chile the minimum farm wage paid to estate workers (even the minimum is often evaded) lagged behind inflation until 1965 when the present Government legislated a new wage and relaxed enforcement of antiunion laws. Between 1953-54 and 1960-61 the wage eroded by one-third.

Large landowners often prefer to invest in nonagricultural pursuits rather than to build up their farms. Sometimes, for tax purposes, they have written off their agricultural enterprise as a loss—whether or not it has proven to be so in fact. If necessary to protect their wealth, they have sent it out of the country. In some countries they have been shown to invest a higher proportion of their income in luxuries than their counterparts in developed countries.

#### D. CONCENTRATION OF POLITICAL AND ECONOMIC POWER

For generations the landowning class has occupied the seats of government. Large landowners have been able to legislate in their own behalf. For example, they receive almost all the institutional agricultural credit (some of which is publicly financed and which because of inflation is often available at negative real interest rates). They are also the principal beneficiaries of other public investments that serve agriculture, including those in technical assistance, roads, irrigation, and electrification. Meanwhile, land tax assessments and rates have been low and delinquency high.

One outcome of the concentration of power and resources in rural Latin America seems to be impoverishment of local government. In Colombia, for example, municipalities are expected to build and maintain roads, schools, hospitals, public utilities, and control marketing facilities. But the rights of the majority to assess and collect taxes and select their own local officials are circumscribed. In the limbo that results, no unit of government seems to respond to requirements of social overhead capital needed by rural communities. Revenues collected by rural municipalities come from commercial business licenses, fines and fees, departmental transfers, and some property taxes. Those who own most of the resources contribute little tax revenue. These sources give communities so few funds that by the time they pay local salaries and administrative costs there is nothing left to supply municipal services.

In a study of 31 municipalities in Antioquia, generally thought to be the most progressive department in Colombia, per capita average municipal revenues in 1965 were only U.S.\$2.32, with only \$0.32 going for social or economic overhead capital. Since only a small portion of this \$0.32 per capita goes for road construction, sufficient farm-to-market roads cannot be built. No amount of technical help will encourage small acreage farmers to produce more if they cannot get their production to market. Even when separate road-building grants come from higher levels of government, maintenance is left to local governments.<sup>9</sup>

Thus, a low rate of taxation, a high delinquency rate, and insufficient autonomy of the local governmental unit thwart local development. That this issue will be difficult to cope with is obvious—local governmental units are largely dominated by bosses, many of whom control most of the privately owned resources in the area and are able to manipulate municipal finances for patronage rather than developmental needs.

The national and local power of the landed class has been slowly declining. The increasing frequency of guerrilla activity, land invasion, and labor unrest attests to the decline of traditional authority in the countryside and to the need for modernization programs that not only increase productivity but also give the rural masses a stake in development.

The situation in rural Latin America, then, can be vividly summarized in sentences that offer little basis for optimism. Most of the land is in traditional farms that are producing below potential. Population is growing rapidly. Exports are lagging and imports are rising. The frontier of unused lands is shrinking. Migration from farm to city is proceeding faster than urban industry can hire new workers. Real incomes of most of the rural population are static or declining. Rural community governments are largely inoperative for development purposes. Traditional authority is eroding as class differences and inequalities become increasingly apparent through increased communications and mobility. Political agitation and civil disobedience are becoming more violent and more frequent in the countryside.

Food shortage, then, is only part of the problem. Farm production will have to increase, and this will require substantial public investment in agriculture. But investments must be made with full attention to problems of rural employment and of income distribution.

<sup>9</sup> Herman Felstehausen, "Memorandum: The Study of Local Governmental Structure as a Part of Agricultural Development Research," The Land Tenure Center, University of Wisconsin, March 14, 1967.

## V. SOME POLICY IMPLICATIONS

## A. ISSUES FOR LATIN AMERICAN GOVERNMENTS

The need is for active land management, low cost production increases that result in lower food prices, and employment or tenure arrangements that secure economic and political participation for large numbers of people. Meeting these needs will require Latin American governments to carry out different policies and programs for different subsectors within agriculture.

*1. Progressively managed large farms and plantations*

These are the farms that feed the cities and provide export earnings. As we mentioned earlier, the current U.S. policy impetus seems to focus almost exclusively on helping national governments to promote such farms and increase their numbers by stimulating greater productivity through the application of new technology. It has even been suggested that appropriate technology and management might best be introduced by bringing in foreign investors and entrepreneurs to stimulate commercial production, especially of export crops, so as to solve balance-of-payments problems. This narrow emphasis on the commercial and export sector is understandable given the balance of payments and urban population pressures. But it is vulnerable because it does little to provide employment and because it ignores the pressures for structural change. In addition, it is profoundly affected by wide fluctuations in the prices of export crops.

A land reform program that converted productive large farms into small peasant holdings would help satisfy the need for increased employment and participation by rural people, but probably not without fairly heavy shortrun decreases in innovativeness and productivity.

It is probably fully defensible to argue that many well-managed large commercial farms should be preserved (as they would be under the provisions of existing agrarian reform laws in most Alliance countries). Modernization policies should neither destroy nor concentrate exclusively on this commercial sector. Instead, they should encourage as much employment and income security as possible on these farms without creating disincentives for management.

And they should encourage increasing intensification; that is, larger proportion of land in high-income crops through shifts in enterprise combinations, and higher output per acre through use of yield-increasing (as opposed to labor-saving) technology.

*2. Traditionally managed large farms*

Traditional large-scale farming contributes little to needed production. Its absentee ownership and traditional and paternalistic labor patterns are vulnerable to labor unrest as the *patrones* lose their social welfare functions, as their superiority is increasingly questioned and challenged, and as political agitation reaches the workers. It is the underutilized land of such farms that is especially vulnerable to peasant invasion.

Some observers have suggested that Latin America's traditional haciendas can and should be transformed quickly into productive

commercial farms. Early Alliance for Progress emphasis on redistribution of these lands has been largely replaced by a new emphasis on technical modernization without structural reform.

In the light of past performance, there is little reason to hope that increased investment within this traditional sector would result in commensurate increases in agricultural production. But even if it did, rural employment would likely decrease and the gap between rich and poor would almost certainly widen. Given the present land tenure system, as productivity increases, the incomes of the resource owners rise much faster than those of the rural majority. The workers have little or no bargaining power, and hence, increases that accrue to the agricultural sector as a whole do not "trickle down." In fact, most of the current pressures toward modernity on existing large farms are also pressures toward decreased employment. Some import and credit policies encourage mechanization which more often than not is used to decrease employment rather than to increase output per acre. Social legislation and labor unrest encourage landowners to keep fewer workers. Changes in farm technology are sometimes easier if machines replace men. Supervision and handling of costly machinery, equipment, and livestock is easier if a few skilled workers replace the large numbers of traditional resident laborers for whom the hacienda has provided a secure (if decreasingly adequate) subsistence.

Thus, if in response to tax, price, and other "carrot and stick" policies, inactive owners either sell to commercial farmers or become more active themselves in introducing new technology, it will probably decrease employment and increase labor unrest. Investment in technical measures within the present institutional context may achieve optimistic shortrun results only to run afoul of costly social and political upheaval.

It is true, of course, that these traditional large farms provide some processing and marketing services, and any new structure of agriculture might require emergence of new marketing channels before urban food supplies would return to pre-reform levels. Increases on well-managed existing commercial farms would probably offset this tendency somewhat.

These traditional farms also have irrigation systems, central buildings and storage facilities, and integrated use of cropland and pasture that cannot be immediately adapted to the needs of individual peasant farmers quickly or without some cost. Still it would appear that there is little to lose in the way of production and much to gain in the way of increased participation and employment of rural people by transforming much of this underutilized and poorly managed land into new peasant farms. Reform is not simple or costless; it does appear to be necessary in the face of mounting pressures on the existing system.

### *3. Existing small farms*

This sector can probably continue to absorb some population increase until development-created employment begins to catch up with population growth. Self-employed small farmers are generally willing to work for lower labor incomes than they would accept as hired workers on large farms or outside of agriculture. If in addition, technology can be adapted to their needs (as in Japan and Taiwan) and if markets and credit can be made available to them, small farms can employ even more people and contribute more to marketable surplus. It may be possible through public investment (especially in

service institutions), and incentive policies, to transform the upper third to half of this sector into small- and medium-sized commercial farms. There is no substantial evidence of this ever having been accomplished in Latin America, though recent analyses of the Mexican experience are encouraging.

4. *New peasant farms created by land reform*

Outside Mexico, Bolivia, and Venezuela there are not many new farms of this kind. Those that do exist—and those that come into existence as reforms are put into effect—are in many respects similar to minifundia, except that they are larger, since the man-land ratio is usually higher on minifundia than on the traditional large farms from which the new farms are created. Land reforms always run the risk that after some time has passed population increase will make the new peasant farms resemble existing minifundia.

As with existing small farms, attempts should be made to move reform-created farms as rapidly as possible toward commercial agriculture with limited mechanization and increasing use of fertilizers, improved seeds, and protective chemicals. There is no economic reason why this should not be possible on the model of Japanese and European peasant agriculture, modified to suit wage levels of Latin American countries. However, as we pointed out earlier, there is not yet a Latin American model of such an agriculture.

Even if reform-created peasant farms only become subsistence units, reforms should not be discouraged. If reform does no more than provide secure subsistence for large numbers of rural people, it will contribute to economic and political stability and buy time for urban and industrial development to catch up with population growth.

Programs to provide secure and legal title for present occupants are less controversial than abrupt changes in landowning patterns, and of great importance in some areas. In most Latin American countries, there are many so-called squatters on public lands. When titles are not secure the more economically powerful move in and claim ownership. Bitter conflicts develop over such disputes, and outbreaks of violence are not uncommon (as in the early settlement of our West). There are perhaps several hundred thousand farmers without title in all of Latin America. This is not conducive to political stability, nor does it offer the security required for long-term investments in agriculture.

In general, the need is for flexible agrarian policies. Doctrinaire and ideological solutions are not appropriate, not only because conditions vary from country to country, but also because the policy needs of a given country vary over time. It would probably be a mistake, for example, for any country to adopt a uniform ceiling on land ownership applicable to all farms. The need for further changes in all types of farms cannot be foreseen and dealt with by means of a single wholesale transformation of agriculture.

The emphasis should be on increasing production at low cost through yield-increasing technology along with maximum employment and employment security. It is not yet clear that this combination can be achieved on any one type of farm. Protecting the existing commercial farms will serve as a hedge against decreases in production and marketed supplies. Assisting minifundia farmers and creating new peasant farms will serve as a hedge against increasing unemployment,

decreasing employment security, and increasing unrest. At the same time a search should continue for policies and devices that achieve both production increases and maximum employment on all kinds of farms.

#### B. ISSUES FOR THE UNITED STATES

However general the agreement that land reform is absolutely essential to agricultural modernization in Latin American countries, the question remains as to what the United States can and should do about it.

The United States cannot, of course, carry out land reforms in Latin America. The most controversial land tenure policy proposals, such as land redistribution, can be put into effect only by the national governments concerned. Still, what the United States does vis-à-vis Latin American governments and other political forces in these countries can have an impact either in support of or in opposition to orderly reform efforts.

In the original charter of the Alliance for Progress the United States clearly committed itself to encourage " \* \* \* programs of comprehensive agrarian reform \* \* \* with the help of timely and adequate credit, technical assistance, and facilities for marketing and distribution of products \* \* \*" Again this year at Punta del Este the Presidents of the Americas pledged that " \* \* \* the living conditions of the rural workers and farmers in Latin America will be transformed to guarantee their full participation in economic and social progress."

In spite of this apparently categorical support for reform, many aspects of the general U.S. posture in Latin America tend to deter reform efforts. We have already discussed the growing tendency to respond primarily to shortrun pressures brought on by balance-of-payments deficits and urban population growth and to pay much less attention to the potentially explosive political tensions of rural Latin America. There are other and subtler antireform factors.

For example, U.S. officials and representatives of private companies tend to find themselves, in many countries of Latin America, in a close and continuing association with conservative elements in national politics. This is not, as Latin American leftists are wont to charge, the result of a sinister reactionary plot. It is the natural consequence of living and working in highly stratified and class conscious societies where things are accomplished by knowing the right people. If a U.S. company is to operate in Latin America at all, it has little choice but to identify with and accept the working rules followed by the people who have power and who can get things done. For the same reason U.S. Embassy and USAID staffs are often forced to work with elite groups, which are almost inevitably the most conservative. Consequently, the U.S. Government tends to be cut off from meaningful contact with popular movements in Latin America. One result is that reformist elements find themselves seeking ideas and support from groups which are ideologically opposed to the United States; thus hatred and antagonism toward the ruling national elite is automatically transferred to the closely allied U.S. private investor and public official.

There is, in addition, some lack of enthusiasm about land reform on the part of many Americans working in Latin America because they see in it a danger to orderly procedures and the rights of private

property. At its extreme, this view represents the exporting of an almost absolutist philosophy that ignores the extent to which private property is regulated in the United States itself.

Land reform means, among other things, a wider distribution of the rights that accompany the ownership of land. Thus land reform always implies some basic restructuring of the rules of the game that govern the role of property in the society. This may sometimes extend to nonfarm sectors—both foreign and domestic. We need to face the fact that if we encourage a government strong enough to carry out meaningful reforms, we will be encouraging one that derives much of its power from popular movements not initially very friendly to U.S. Government personnel and representatives of U.S. private enterprise. If we actually wish to see reform brought about, we will have no choice but to support governments that on occasion embarrass U.S. officials. The real test of our intent will come if, as may occur, such a government chooses to nationalize some land or other property owned by U.S. companies as a part of a program of internal reform. If we are serious about encouraging the reforms that are essential to modernization of Latin American agriculture, we must be ready to study each such case objectively, and debate the consequences of alternative responses in terms of overall foreign policy rather than on the basis of a rigid criterion universally applied.

Advocating and supporting reform in Latin America may mean dealing with governments that are not always friendly, that may at times embarrass us, and that may on occasion require us to swallow some pride. Yet, to withhold support from truly reformist governments will merely heighten the pressures that lead to violent eruptions and eventually to more radically anti-American governments.

Supporting land reform as a part of our efforts to modernize Latin American agriculture will require different policies in different countries. In several Alliance countries, land redistribution continues to be the object of controversy and national debate but there is a strong official commitment to reform and already some record of accomplishment. In these countries the United States should provide direct financial and moral support for programs of land redistribution, in many cases accompanied by research on alternative procedures and evaluative followup studies.

This kind of U.S. support could be decisive in countries where there is still major opposition to the reforms which must accompany modernization of agriculture.

In two countries, Mexico and Bolivia, land redistribution is not a current policy issue but an accomplished fact. To a lesser extent the same is true of Venezuela. The issues that confront U.S. aid policies in these countries are not related directly to redistribution projects but to the matter of how best to increase employment and productivity on the newly created peasant units and the progressive medium and large farms that were preserved in populated areas or established in areas of new settlement. In these countries, as well as those with lesser accomplishments in reform, the United States should: (1) provide technical assistance and financial aid for land titling in reform areas; (2) provide loans and assistance in implementing credit and information programs for new landowners and existing commercial farms; (3) help finance road construction and other social overhead to provide access to new settlement areas in those cases that offer

promise; (4) support local efforts in training and research related to land reform and agricultural development.

There is, of course, a third group of Latin American countries in which there is little or no commitment or intent to carry out meaningful reforms. In these countries there is little that we can do beyond:

1. Assisting in titling procedures for squatters who are settling the frontier;

2. Aiding efforts to incorporate existing small farms into the commercial sector through extension, credit, and marketing programs (where feasible, such programs should be provided on a package basis that integrates these services around a few high value commodities or crops);

3. Supporting policies that make it easier for peasants and agricultural workers to organize themselves into effective bargaining units;

4. Encouraging better administration of taxes on land.

It will be well for us to recognize the limitations on our ability to determine the scope and pattern of reform. There is no U.S. recipe which we can or should try to impose. The most important step we can take is to review regularly our policies and programs to make sure that we do not inadvertently delay or block legitimate reform efforts. The United States cannot force an unwilling government to undertake a reorganization of its agriculture. But we should be careful that we do not provide such a government with the kind of support that enables it to ignore or repress legitimate internal pressures for reform. To do so will merely postpone the reforms and heighten the possibility that they will be violent rather than orderly.

In general, when considering outlays of funds for agricultural modernization in Latin America, Congressmen and administrators should recognize and vigorously support the idea that modernization includes more than an increase in productivity as measured by a rise in agricultural exports and domestically marketed surplus. Investments in Latin American agriculture must carry with them measures to improve the relative incomes of the disadvantaged rural majority. In the words of the late President Kennedy, "Those who make peaceful revolution impossible will make violent revolution inevitable."

## APPENDIX I

### CASE STUDIES OF LAND REFORM IN LATIN AMERICA

There are, of course, no land reform prototypes. Each country differs in factor proportions, technical experience, political conditions, and cultural heritage. However, three OAS countries (Mexico, Bolivia and Venezuela) have carried out extensive reforms and their experience can be instructive for policymakers who must deal with agrarian problems in other countries.

#### A. MEXICO

Mexico's land redistribution began in 1926, and enough time has elapsed to afford some tentative conclusions about the experience. The striking progress of the Mexican economy has led many to conclude that the revolution and accompanying land reform paved the way for development. Whether or not the reform was in fact respon-

sible in important measure for this progress will likely be debated for a long time.

No other country in Latin America has made comparable strides in agricultural production over the past several decades. And among the Alliance countries, Mexico's only rival for improvement of income distribution is Bolivia.

Between 1941 and 1960 Mexico's per capita agricultural production increased by 46 percent compared to a world average increase of 12 percent, and a decline in Latin America as a whole. By one calculation, based on FAO series, net agricultural output in Mexico trebled between 1934/38 and 1964/65. Between 1949/51 and 1960/62 the value of agricultural production grew by an average annual rate of 4.1 percent.

Prior to the revolution, land concentration in Mexico was among the highest in Latin America. Likewise, the social situation of *campesinos* was probably more onerous than elsewhere in the region. An estimated 95 percent of the rural population owned no land. Productivity in the agricultural sector was meager and absentee landlordism was the rule. Wages were low and because peasants were tied to the farm by debts, money seldom changed hands between landlord and worker.

Now, a little more than 40 years after the initiation of the land distribution in Mexico, more than 137 million acres have been given out in ejidos. These are properties owned jointly by communities, but on all but 3 to 4 percent of them farming operations are carried on by individual families. In 1960 there were about 1.6 million ejido members living on about 22,000 ejidos, which accounted for 45 percent of the cropland, 54 percent of all landholders, and 35 percent of the value of all farm production in the country.

A third of the land now in ejidos was distributed between 1935 and 1940. Between 1941 and 1958 very little land was given out, but the rate increased again during the regime of President López Mateos (1958-64). The man-land ratio varies a great deal, but on the average there are about 67.5 acres of land per ejido member, of which almost 17.5 acres are cropland.

Ownership is circumscribed. A member of an ejido (*ejiditario*) may legally will the land to only one of his children; he may not sell or rent it (although infractions of this regulation are common); he may not mortgage it to secure a loan (which is responsible for a dual credit structure in Mexican agriculture). Furthermore, if an *ejiditario* fails to cultivate his land for 2 successive years, it may by law revert to the ejido to be reassigned. If he rents it out, a similar reversion is legally possible.

Ejidos are organized to provide for maximum local control. The general assembly elects an executive committee and a vigilance committee. Every member of an ejido gets a certificate of agrarian rights and, ultimately, each is supposed to receive a title. (Only about 15 percent of the ejido members actually have this title as yet.)

The *ejiditarios* did not pay for their lands. The government reimbursed the original owners a fraction of commercial value up until 1931 when it suspended the practice. Even when compensated, the owners gained little, since they were remunerated on the basis of their own personal declaration of value for tax purposes, a very low amount.

The revolution and land reform resulted in a dual system of agriculture, the ejido on one hand and the private farm on the other. Many commercial or potentially commercial farms remained in private hands throughout the revolutionary period. In some cases these were unexpropriated remnants of traditional large units. Production on these farms began to increase rapidly after 1940 when the private sector began to recover from the initial shock of the land reform. Frontier areas were left open for private development (ejidos were given out in the most densely populated regions) and there were large public investments in irrigation works which vastly improved production on these privately owned dry farms.

In contrast, little public money was used to support the ejido or to provide ejido farmers with modern inputs, extension, or markets. This is not to say that ejidos have remained completely outside any benefits of governmental investment in the agricultural sector. But they are, as one commentator has claimed, "underfinanced, underdeveloped, underirrigated, and overcrowded".<sup>1</sup>

Heretofore, most commentators have concluded that it took until 1940 before the production of corn, wheat, beans, and rice in Mexico regained 1920 levels. This is now being seriously questioned. One problem is, that while statistics can be fairly accurate for most marketed surplus (which certainly did drop for the products mentioned), they cannot account well for the home consumption of produce grown by campesinos. It is quite possible that production remained the same after land reform or even increased, but that more was consumed by peasants.

The decennial census of 1960 which became available in 1965 makes it clear that the ejidos have made considerable progress. Ejidos apparently did not produce more in 1950 than they did in 1940. But 1960 represented a large increase over 1950. There is no clear indication of any significant difference in crop yields between ejidos and private farms over 12.5 acres, when all commodities are aggregated. Private farms under 12.5 acres had slightly higher yields in several crops, indicating more intensive tillage and higher proportions of high value crops.

Considering total output, the situation has been thus summarized:

The ejidos doubled their farm output from 1940 to 1960, while their labor force rose much less and their use of capital and other externally generated factors of production remained at a low level. It cannot be denied that this higher output with little change in labor and capital must have meant some modest increase in the level of net income of the ejido population. The private farms over 5 hectares, on the other hand, nearly doubled their use of labor while their output rose by 3½ times and their use of capital and other purchased inputs were much higher than those on the ejidos. It is therefore difficult to say whether the rate of net produce per worker on the private farms over 5 hectares rose more or less than that on the ejidos. Since, to begin with, the rate was higher than that of the ejidos (because ejidos were established principally in congested areas) the difference in rate between them and the private farms may have diminished somewhat.<sup>2</sup>

<sup>1</sup> Wolf Ladejinsky, "Traditional Agriculture and the Ejido." Unpublished manuscript, Oct. 26, 1966 p. 41.

<sup>2</sup> Folke Døvring, "Land Reform and Productivity: The Mexican Case, a Preliminary Analysis." AERR-83, Department of Agricultural Economics, Agricultural Experiment Station, University of Illinois, November 1966, p. 13. Five hectares equal approximately 12.5 acres.

A surprising gain has come simply from applying more labor to the land on ejidos. Average annual expenditures for external inputs was 635 million pesos for the farms over 12.5 acres and 251 million pesos for ejidos, which account for a slightly smaller total area. Thus, the large commercial farms are "using more of the hardware that might otherwise have been invested toward more rapid industrialization of the country."<sup>3</sup> The same is doubtless true for public expenditures, since farms over 12.5 acres have enjoyed the benefits of more of this funding than ejidos. The "ejido production is cheaper, in a social-account opportunity cost, than large-scale private farm production."<sup>4</sup>

Thus, while the productivity picture is mixed, it is far from bleak. And Mexican campesinos are immeasurably better off in terms of employment, income, freedom, and possibilities for advancement than they were before the reform. As the peasant's buying power has risen, he has helped stimulate the industrial sector. And as the industrial sector grows, more and more campesinos are gradually finding their way into the city labor force. Reform has brought economic incentives that were absent under the old system. There is evidence that literacy in the countryside is increasing. Thousands of peasants who formerly had no claim on education and no participation in local government can now petition for schools or tax themselves to build their own.

Many former owners of haciendas who lost much of their land began to take better care of what they had left in order to avoid a ruinous drop in income. Capital accumulation and investment thus followed on the heels of reform. Reform (except possibly in the very short run) did not drive capital out of the agricultural sector, but required it to be used more effectively. In transforming the political, social, and economic balance of the country, it is possible that land reform had its major impact outside of the ejido sector—maybe even outside of agriculture.

There are doubtless many improvements which could be made in the ejido sector. There is wide variability in performance which does not show through in gross data. The structure of the ejido itself merits serious rethinking. For example, ejido farmers should perhaps be allowed to sell their property to others within the community in order to get some return on their investment as they leave to take jobs in other parts of the economy. Then, too, there is ample evidence that a large proportion of the sector suffers from lack of services. Public investments in market, extension, and credit would likely increase production. A more intensive focus on the ejido will become necessary as the frontier shrinks and expansion of agriculture at the "extensive margin" becomes more difficult.

In sum, the Mexican precedent generates optimism about land reform. Hopefully, reforms in other countries would need to be neither as violent nor as disruptive as was Mexico's. And it should be possible to shorten the time required to bring marketed supplies back to and above pre-reform levels.

<sup>3</sup> Ibid. p. 15.

<sup>4</sup> Ibid. p. 16.

## B. BOLIVIA

Compared to Mexico, reform in Bolivia took place more quickly, on poorer land, and in a later era. Because of its contemporary nature and its lack of institutionalization, data on the Bolivian situation are still quite scarce. Again, the Government did not—possibly it could not—channel investment funds into the newly restructured agricultural sector. And agricultural progress that has occurred in Bolivia since 1953 has come about through institutional change and without appreciable capital investment designed to increase yields.

Decree No. 3464, signed August 2, 1953, was an attempt to recognize a partly de facto situation growing out of the revolution of 1952. During this upheaval, which was relatively bloodless, thousands of campesinos rebelled and seized the property they worked. Most of this land was poorly exploited. While there is no universal agreement as to the process by which the reform spread, it did so very rapidly. It probably began in an area where peasants were already strongly organized—in the Cochabamba valleys. It seems to have diffused as more peasants organized and as the revolutionary government in La Paz encouraged peasant unity in an effort to capture their political support.

Bolivia's land reform law makes a distinction between idle rural property and agricultural enterprises which are "operated with large capital investment per unit of land, producing for the market, with labor paid in cash wages and enjoying the right to organize and participate in collective bargaining, regardless of the amount of land held by the enterprise."<sup>5</sup> In fact, the law was only partially successful in protecting these agricultural enterprises.

As in the Mexican case, the decree established the rights of Indian communities to recover land usurped from them under the old regime. Furthermore, all Bolivian citizens, 18 years of age or over, who intended to work the land could receive a grant on the condition that they cultivated it within a period of 2 years. Peasants who lived on the haciendas were declared owners of the land they worked. The National Agrarian Reform Service would later formalize their claim.

The density of population in the high Andes was so great that only in very exceptional circumstances could the minimum holding, as defined by the decree law, be granted. In order to satisfy the maximum number of campesinos, smaller units were given out; this resulted in subsistence farms in the most heavily settled parts of Bolivia and created pressures, felt even today, for settlement on the frontier.

Recent work challenges the widely held assumption that the Bolivian land reform led to a decline in production. Marketed supplies certainly did drop off. The U.S. operations mission reported that production indexes fell one-third between 1953 and 1954-55. U.S. Department of Agriculture data shows that production continued to decline until about 1956, while the upturn in the 2 succeeding years was slight, but these were extremely dry years in Bolivia.

The prerevolutionary marketing system was disrupted by the reform. It is possible, therefore, that production was not interrupted as much as previously supposed, but that increased peasant consumption

<sup>5</sup> Richard W. Patch, "Bolivia: United States' Assistance in a Revolutionary Setting," in Richard N. Adams, et al., "Social Change in Latin America Today." Vintage Books, 1961, p. 127.

and a faulty marketing mechanism were responsible for the apparent decreases. A dual marketing system prevailed in the northern highlands prior to reform. Agriculture seems to have been vertically integrated to uncommon degree. Absentee landlords operated stores in town through which they sold most of the produce of their farms. Peasant workers on the landlord's farm delivered the produce from all but their own subsistence plots. Peasants took barley directly to the brewery and wool directly to the mill, both of which credited the landlord's account accordingly. Occasionally, buyers of animals came directly to the farm.

The second major market channel was made up of barter and small cash transactions of peasant families in markets situated in the provincial and cantonal capitals. Here peasants dealt with retailers from the city who came to trade goods. They bought mainly small consumption items, and usually paid with produce from their small parcels. This market was never large since peasant plots were small and not very productive. They had little buying power and thus provided little stimulation for production of manufactured goods.

Most of the market channels operated by large landowners disappeared when they lost their land in the reform. It took time for new channels to develop and as a result the amount of produce available in towns fell off rapidly.

A restructuring of the market system began immediately and by the late 1950's and the early 1960's a single integrated market was emerging. The number of provincial and cantonal markets burgeoned. As quantity of goods sold in these "peasant" markets increased, so did the number of trucker middlemen. At the same time a return flow of investment to rural areas was set in motion. More consumer goods were purchased and more cash flowed into farm areas. The total amount of goods that was bartered dropped sharply and cash exchange increased. There is evidence that more purchased inputs are used now on the northern highlands (in the form of fertilizers, hybrid seeds, and insecticides) than formerly. Peasant participation in the money economy is, according to one study, more than four times what it was prior to the reform.<sup>6</sup> This does not include inputs for agriculture or other capital purchases—such as roofing, bicycles, cement—items which seem also to be much more prevalent in this area than before the reform.

The reform has not, of course, solved all of Bolivia's farm problems. Little technical assistance has been available from Government or any other sources. Credit made available for increased purchase of yield-increasing inputs was badly eroded by the inflation of 1952-56.

As one commentator has noted:

. . . the 'land affection' process established by the Agrarian Reform Law has to date recognized the possession of some 400,000 rural families—that is, their legal right to receive titles to the holdings they possess. But of these, only about 50 percent have actually received the titles. Almost all of these campesinos have been in possession of these lands for as long as 14 years. In many cases their legal rights were recognized through a supreme resolution signed by the President five, six, or seven years ago, but they are still waiting for their titles. This state of affairs has, of course, created problems and conditions which prevent the economic and social development of the rural areas. The lack of security discourages land investment among the campesinos and the old landowners who are unsure of their respective rights. Agricultural credits are not granted without a title.

<sup>6</sup> Ronald James Clark, "Land Reform, Economic Participation of the Peasantry and Economic Development." An unpublished paper of LTC-CIDA, "Study of Agrarian Structure in Bolivia," mimeographed, March 1967, pp. 26, 47, 48.

Legal problems multiply as the years pass. The original campesino may have died or moved and the occupiers must undertake the difficult task of proving their rights as successors. All of this, in turn, has resulted in a loss of faith in the land reform, both by the campesinos and the population at large. Also, it has prevented the full application of the necessary complementary measures to a process of land distribution: that is, credit, technical help, marketing facilities, etc.<sup>7</sup>

Despite the difficulties, Bolivia's land reform seems to have paved the way for long-run progress. One of its most important effects has been to break down the barriers that have traditionally separated the Indian population from the national life. The "two culture" world of the Indian and the white is being dismantled. As a result, the fatalism of the Indian seems to be disappearing. Concomitantly, the peasant (who now resents the epithet "indio") is more willing to search out new possibilities for self-advancement. This is perhaps best indicated by the enthusiasm that is now shown for building schools and by increased settlement in the lowlands.

#### C. VENEZUELA

Unlike the agrarian reforms of Mexico and Bolivia which flowed from widespread disorder and violence, land reform in Venezuela has thus far been carried out in a peaceful and orderly way. Large numbers of families have received land under the Agrarian Reform Act of 1960. By 1963, official figures indicated that 33,000 families had been settled on expropriated private holdings and 34,000 on public lands. The reforms continue: the National Agrarian Institute reports that 40,782 campesino families (or about 78 percent of those who applied) were granted land in 1965. Again, unlike Mexico and Bolivia, agrarian reform in Venezuela (at least since 1960) generally has distributed larger land units and provided a wider range of services to land reform beneficiaries. This has been financially possible because of petroleum earnings, part of which the Government has allocated for agricultural development.

Venezuela's land reform has been deeply influenced in both scope and design by the Federación Campesina de Venezuela, a large and powerful peasant organization with a complex history dating back to the 1930's. Since the overthrow of the Pérez Jiménez dictatorship agricultural policies have been shaped by a close interaction of the FCV and three political parties—Acción Democrática (AD), Social Christian Party (COPEI), and the Democratic Republican Union (URD).

The Campesino Federation is the major pressure group influencing the administration of agrarian reform. It also provides a channel through which peasants gain access to government services and programs and seek official action for redress of grievances. The Federation derives its effectiveness from its ability to generate political support for parties which further its interests. It has 550,000 members and some 3,500 local unions. About 65 percent are affiliated with AD, 25 percent with COPEI, and 10 percent with URD. Positions on the governing council of the Federation are divided in roughly the same proportions. In order to expedite the quid pro quo, it is common for Federation leaders to have parallel party posts.

<sup>7</sup> Joseph R. Thome, unpublished report cited in Peter Dörner, "Interpretive Synthesis and Policy Implications of Land Tenure Center and Related Research," LTC Papers, No. 31, January 1, 1967, mimeographed, pp. 43-44.

AD dominated governments have been elected in 1958 and 1963. The AD, in coalition with COPEI and URD, sponsored the agrarian reform bill of 1960. This party coalition also pressured for substantial budgets for three reform agencies—the agrarian reform institute, the agency which provides credit and market support, and the organism which provides extension and technical services.

Reform benefits are not restricted to union members, although a recent survey shows that areas with strong unions have received 16 percent more benefits of agrarian reform than nonunionized areas.<sup>8</sup>

## APPENDIX II

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