

**PROJECTS THAT TITLE LAND IN CENTRAL AND SOUTH AMERICA
AND THE CARIBBEAN: EXPECTATIONS AND PROBLEMS**

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PROJECTS THAT TITLE LAND IN CENTRAL AND SOUTH AMERICA
AND THE CARIBBEAN: EXPECTATIONS AND PROBLEMS*

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Many programs have been proposed to solve the problems of landlessness or insecure land tenure by dealing in some way with land titles, either their distribution or simply their registration or "recognition." Examples of such titling projects include cadastral surveys, title distributions, land registration, colonization, and even what is called agrarian reform. I will consider in this paper some basic concepts common to "titling" programs, the differences among them, the problems they help to resolve, and some issues which often affect the outcomes of such programs. In particular, I will discuss the conditions under which such programs can stimulate agricultural production, investments in the agricultural enterprises, land markets, tax revenue, information for zoning and investment, and sociopolitical reforms of a broader nature. I also consider some of the environmental and social costs of such projects, which may overshadow their positive achievements.

1. A Title to Land

A property title to land is a document which certifies, within a particular legal system, that some individual or group of individuals has property rights over a certain piece of land.** These property rights may be of varied

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** Bentham observed: "We shall see that there is no such thing as natural property, and that it is entirely the work of law. Property is nothing but an expectation . . . of deriving certain advantages from a thing we are said to

extensiveness as well as limited in time, depending on the definition of property in any given country. (See Simpson 1976 for a useful summary of the "bundle" theory of property rights.)

By contrast, a nonproperty title, such as the usufruct title issued in the Dominican Republic agrarian reform, gives an individual the right to farm a particular piece of land during the holder's lifetime, a right which is inheritable by the titleholder's heirs but cannot be sold. This paper will deal with property and nonproperty titles, with the difference between the two being mainly the right to sell the titled land. Both kinds of title provide some social recognition of the rights to land.

Whether granting full property or more limited rights to land, a title excludes or extinguishes claims to the land except that of the titleholder and those rights which the state or granting agency or other former holder retain. "[T]he essence of private property is always the right to exclude others" (Simpson). The exclusionary nature of property is a well established concept,* and a title certifies this exclusion, although it is a political question as to how exclusive the property rights are (see Demsetz, Runge) which the title certifies.

A title to land, then, has two general functions: (1) it provides evidence of what rights to land the holder of the title can expect to be sanctioned by law; and (2) it extinguishes or excludes other claims to the land.

2. Types of Land Titling Projects

Programs which title land are varied, and problems have differing salience in each type. Using the basic idea of land titling as a socio-legal process of extinguishing claims to land, two questions can help distinguish among types of program: (1) what types of interest are being extinguished, and (2) what types of interest will remain once the title is issued? In answer to both questions, there are generally three types of interest in land in most societies: state or governmental interest in land; communal, tribal, or family-held lands; and, finally, individual, private, landed property. If we produce a 3x3 table using these three categories, we can differentiate among the principal types of titling programs (see facing page).

A first observation is that in the Latin American and Caribbean context certain types of land titling are something more than programs of titling, i.e., the massive transfer of territorial control from one group to another (see types 1, 4, 5). However, the remaining six types of titling program have

possess" Cohen and Cohen stress the social nature of property: "we must recognize that a property right is a relationship not between an owner and a thing but between the owner and other individuals." Also Ely: "The essence of property is in the relations among men arising out of their relations to things."

* A typical expression of this concept is provided by R.T. Ely: "By property we mean an exclusive right to control an economic good."

FIGURE 1
Types of Program which Involve Land Titling

Nature of the Newly Titled Claim to Land

| | | STATE | COMMUNAL OR GROUP | INDIVIDUAL |
|---|----------------------|---|---|--|
| Nature of Interests to be Extinguished | STATE | 1) Conquest or purchase | 2) Collective agrarian reforms | 3) Colonization projects |
| | COMMUNAL OR GROUP | 4) Imperialist conquest, or postindependence transfer of property | 5) Independence movement | 6) Land registration |
| | INDIVIDUAL | 7) State farm agrarian reforms | 8) Redistributive agrarian reform; co-op type | 9) Redistributive agrarian reform; farm type |

Examples of the six types of land titling program include:

- 2) Dominican Republic agrarian reform begun in 1972;
- 3) United States and Colombian frontier settlement schemes;
- 6) creation of Caribbean land registries and registry maps;
- 7) Nicaraguan land reform immediately following the overthrow of Somoza, on his lands;
- 8) Chilean (Frei) agrarian reform, Christian Democratic period;
- 9) Ecuadorian expropriation of huasipungos; Salvadoran land-to-the-tiller (Phase III of the reform).

been tried in a more limited sense and usually within an established legal framework.

The first type of titling program, "collective agrarian reforms," is more of a licensing program to give access to lands being distributed to certain people as part of a group and not as individuals. A title in such instances recognizes the right of an individual to be a member of a group farm, often a cooperative, which is the entity to which the land is assigned. The Dominican post-1973 land reform collectives distributed titles to the beneficiaries of the reform, but as members of collectives without specifying ownership of any particular piece of land in the settlement projects. The state had acquired the land from private, individual owners as partial payment for irrigation infrastructure on previously privately held lands.

A second type of land titling project involves transferring public lands to private individuals. Often those projects are known as colonization or homesteading projects. A primary example is the settlement of large parts of the United States through the Homestead Act of 1862, by which individual parcels of land of 160 acres were temporarily assigned to individuals who, for a small transfer fee and after actually working the land for five years, received fee-simple title.* Between 1868 and 1923, 1,346,163 homestead titles were issued for 213,067,600 acres. In this titling program, the rights being extinguished were nominally those of the U.S. government which had acquired vast amounts of land from other sovereign states (the rights of native Indians to these lands had been previously or concurrently "extinguished"). Other examples include colonization projects in Colombia and Ecuador.

In many cases of colonization the supposition of the land being empty or without any private claims is often incorrect, although legally valid. People use public lands with or without permits or rental arrangements, so that a colonization-titling effort which brings new settlers into an area often becomes engaged in extinguishing de facto claims or claims which derive from customary or communal systems not recognized by the state sponsoring the titling program. Conflicts, delays, and complications will usually arise under such conditions.

The third type of titling program is the land registration or cadastral survey type. In such programs a procedure is specified for resolving competing claims to parcels of land and to create a registry of land parcels including the names of the titleholders, the size and location of the land parcels, and any other claims to the land which might exist (mortgages, liens, etc.). Such programs usually extinguish traditional, communal, or intrafamily claims to land, especially in areas where communal and family tenure forms are important, as in some areas of the Caribbean and the Andes. Such programs do not necessarily have to result in only private, individual titles, but a variety of

* Later modifications to the law increased the acreage to 320. Also, the law allowed the homesteader to "buy" his title before the five years were up, which contributed to a great wave of speculation and the transformation of privately owned and operated land to privately owned, tenant-operated land (see Hibbard, Ch. 18).

factors tends to push them in such a direction, including their primary purposes which are often to raise land-based tax revenues and/or to simplify antiquated land property systems and registries to facilitate private dealings in land (Simpson; Lewis).

The fourth and fifth types of titling program involve both the state acquisition of formerly private lands and their titling as collective enterprises, either state-managed farms as in Nicaragua or more worker-managed ones as in Salvador's agrarian reform, Phase I. In these two programs an individual certificate of title is typically not issued, but rather one has an implied right to work and to have other noncash rights (housing, garden plot, etc.) in the collective. The individuals who desire to become members of the enterprise are evaluated and permitted to become part of a set of reform beneficiaries who work on the reform enterprises on a permanent basis. In the Salvadoran case even part-time workers are given some tenure in the sense of being assured of at least some work during the year on the cooperatives.

In the sixth type of titling program, the possessors or users of an area of privately owned land receive some sort of title to that area, and thereby receive some legal recognition of their individual holdings. The land-to-the-tiller program now being implemented in Salvador and the antihuasipungero reform tried in the 1960s in Ecuador are examples of this type of titling effort. The rights being extinguished are, in these cases, those of the large landowners who had previously ceded use rights to individuals in exchange for cash rent, a share in the production, or labor to be performed by the land user for the hacendado. This type of titling program reflects the Lockean argument that property is created when people mix their labor (in the classical view, the only "natural" form of property) with nature's gift of land. The rented parcels, through the work of the renter over a period of time, become the "property" of the renter, although the legal recognition of such rights emerges only under special conditions. (See Parsons' elaboration of this theme.)

Squatter rights can be legalized in most countries under laws of adverse possession. Such modifications of property rights depend expressly on the squatter having avoided the payment of rent, thereby demonstrating the invalidity of property rights of the person who at one time might have had an ownership claim to the land on which he is squatting. Land registration projects can help apply laws of adverse possession by providing local court and boundary settlement procedures cheaply enough for the squatter to avail himself of the existing laws.

3. Issues to Consider when Designing Titling Projects

3.1 The Land Information System

The "evidence of rights" function of a title links the titleholder with the legal and administrative structure of the state and with private institutions which record basic land information. The security of title depends in great measure on how the adequacy of this linkage is. However, that linkage is very often problematic and the source of many difficulties which titling programs have experienced in the past and will probably have to face in the future:

a. Transaction costs of the legal system

The costs and complexities of access to the formal legal system often reduce the poorer landholder's tenure security and in general condition the exercise of the titleholder's rights. Strasma notes that in the Dominican Republic the time and effort needed to secure a legally valid title to land are often prohibitive for peasants, especially if they have to pay "tips to cause a piece of paper" to move through the bureaucracy. A proposal to stimulate the titling of land would undoubtedly benefit from an assessment of these transaction costs and how they differentially affect various classes of landholders or people desirous to hold land.

b. Strength of customary rules outside of the "legal" land information system

The informal or customary rules relating to the acquisition of rights in land and their defense often compete with the formal system concerning land rights.

In Haiti (as Murray has pointed out), the Napoleonic Code stipulates that all heirs, sons and daughters, inherit equal shares in land. However, with the tremendous population pressures on land, a parent will often grant sons use rights to his land which in practice carry over after his death. Daughters, then, often find themselves without access to their equal inheritance share and can gain access only at great cost and with much intrafamily conflict.

In a study of Jamaican land tenure, Clarke notes that under the law the eldest legitimate son is the sole heir to land in the case that there is no will. Illegitimate children have no rights. However, under customary rules, all children, legitimate or illegitimate, inherit, "reflecting West African principles."

Such gaps between legal theory and actual practice concerning land are found throughout Latin America, especially in geographic areas where the dominant legal and economic system has not penetrated. To consider land as a commodity in some indigenous communities, implying thereby its purchase and sale by whomever desires, would be misleading. Similarly, it would be incorrect to assume that land held by the powerful can be bought by anyone, when in fact such land can be purchased only by the equally powerful, regardless of legal assurances to the contrary.

If land titling has as its function the improvement of the commodity status of land, such traditional constraints on its free marketing should be investigated. This is not to imply that traditional rules are always negative and should be studied only to subvert. Traditional rules concerning land access may be ecologically sound and socially egalitarian, as some argue to be the case in the Ecuadorian jungle. The settlement of such areas under land laws designed for agriculture may prove destructive of a fragile eco-system. Titling projects can learn from traditional systems as well as attempt to change them.

c. Identification and location of land parcels

A third problem area concerns which type of parcel identification system is to be used in the titling program. The existing land parcel identification system will usually be chosen for a titling program, but if the existing system is metes-and-bounds boundary identification embedded within a title registry system, it might be useful to introduce a land-parcel registry system, or a registry map concept based on geodetic control and using either the British "general" boundaries concept for boundary location or the "fixed" boundary concept used in the United States and other "new" countries. The traditional property identification system often is costly and slow and is controlled by certain economic and social interests, which can imply the necessity for a fundamental change in that system before a titling program is undertaken. Many of the Caribbean commonwealth countries have undertaken this restructuring of the land registry.

This question refers basically to the nature of the society's land information system, its structure, and management. If the titling program uses existing systems and procedures, the information generated concerning the newly titled land must easily fit into that existing system. However, the existing system may prove to be already inadequate to the demands of even the preprogram needs of people to record their dealings in land, let alone process the often significant numbers of transactions generated by the titling effort (see National Science Council's proposals for improving the land information system in the United States.) Moreover, the complexities of the existing system will often be exploited to the maximum by those whose rights are being extinguished in order to challenge wherever possible and whatever step in the procedures being followed to extinguish those rights. In the Chilean agrarian reform, the maneuverings of state and private owners of the expropriated large farms often dragged on for several years, often because the landowning families kept changing the name of the hacienda owners (always a member of the family) in the title registry, just one step ahead of the land reform agency. To this day, in the Dominican Republic as much as 50 percent of the lands already provisionally titled by the state to land reform beneficiaries have not yet been expropriated by the state, but rather remain in the name of the previous owners.

Under such circumstances, the designers of a titling program may decide to initiate a new system, usually one resulting in a "provisional" title in order to facilitate the possession of the land by the new titleholder. However, even though they are provisional, it is critical to design a durable land information system for the titles. Such a system would usually include a master file of such titles, the geographic information linking title to an identifiable piece of land, and the linkages of the provisional title to the traditional title transfer process. Such a system requires procedures, space, and people to record, update, and make accessible pertinent information. The salience and prestige of such an information system are of critical importance to the security of tenure granted to the new titleholders and, thereby,

highly relevant to their farming investments and the plans they make for passing the property on to their children or in some other way disposing of the property in case of illness or incapacitation.

Typically a critical period in titling programs which do not progress much beyond the "provisional title" stage comes some 20 years after the bulk of such titles have been distributed, i.e., when the titleholder's children come of age and the family has to decide on the intergenerational transfer of land. Suddenly the information system in particular, as well as the ambiguities and unmade decisions of the past, come under heavy scrutiny. At times this review occurs relatively soon, as in the case of Chile, and any inadequacies in the titling information system may fuel a cancellation of much of the titling work done earlier.

d. The communication of land information

An often overlooked aspect of land titling is the role of human perceptions.* Human thought and communication are to a large degree based on use of a mixture of natural languages, number systems (mathematics/statistics), and graphics (including maps). Since these thought and communication vehicles act as information filters, each exhibiting certain strengths and weaknesses, the way that they are used can significantly influence the speed and depth of understanding, as well as the effectiveness of communication among the individual holders of land and public agencies which issue or guarantee titles. Our cognitive style--our way of viewing and interacting with our surroundings and the manner in which we formulate and solve problems--is a reflection of the variable emphasis we place on these linguistic, numerical, and graphic devices. Of course, being dependent as they are on the collective influence of past experience, cognitive styles vary cross-culturally as well as from individual to individual.

Possible conflict between the cognitive styles of the three players in a land information system (titling project personnel, civil servants, inhabitants) involved in the resurvey/retitling of land is a central issue that must be addressed. Eventually the inhabitants are asked to change drastically how they and their ancestors have viewed their environment for centuries and to accept new restrictions and freedoms concerning how they can utilize their land in the future. How this is done--that is, the manner in which the resurveying/retitling is carried out, the way project results are presented to the people, and the means provided for future access and interaction with the land records--will probably be more critical than technical factors in determining the long-term success or failure of such projects. In sum, the proper mix of verbal, numerical, and graphic methods will be critical.

Unfortunately, the optimum mix of thought and communication vehicles is not part of our common knowledge. This is true for the United States

* This section draws heavily on the ideas of Phillip Muehrcke.

as well as for foreign countries, which in part explains why policy-making and planning activities tend to bear so little relationship to the quality of basic data inputs. At the minimum, there is need for titling project personnel to determine how residents have learned to integrate the various vehicles of thought and communication about land tenure into their everyday lives. This information may suggest several alternative plans for carrying out the titling project, the presentation of results, and the management of the new land records information. Different plans should be tested in separate demonstration areas, and the ideas generated should be used in outlining the best strategy for the general program of survey execution, educating the populace, and implementing the modern land records system. Constant monitoring of cognitive aspects of the land records system should also be beneficial to detect why people stop using the system or in other ways subvert it.

e. The public benefits of a land information system

A final set of land information system issues, which can only be mentioned in this paper, deals with the "public" functions of land information systems, such as taxation, land market facilitation, zoning, and land use planning in general. West and others have commented on the benefits of titling programs of the cadastral type for such public purposes. Most countries in Latin America have a land cadastre involving some listing of properties and their owners so that a (usually insignificant) land tax can be levied. However, few cadastral systems work very well. (See Sazama and Davis.) Similarly, land use planning has been given greater importance recently in some countries; environmental concerns, wildly fluctuating land prices, and speculation in land have in certain places motivated the creation of land use planning and zoning authorities which require ownership and other information to permit adequate planning. Again, however, these efforts have met with very limited results.

The issues involved in the creation and maintenance of public land information systems are complex and deserve more attention than they are usually afforded. It would be appropriate, however, to note that in this problem area, as in most others mentioned in the paper, the stage of development of the public administration system is an important determining factor.

The titling of landownership makes sense in economic systems where private property is a fundamental institution, but, as has been noted, property is a flexible concept depending on specific historical and political conditions for its operational definition. There are always limits on private property imposed by custom, public laws, and agencies, and these limitations are related to the stage of development of the state administrative apparatus and traditions. (See Frankel.) In countries with a less active land market, the state apparatus functions mostly in a "market-constituting" way. To "constitute" a land market, land titling might be undertaken in areas where land had not been treated as a commodity to be bought or sold. But even such an initial

program requires substantial institutional development, including a land distribution agency, state-financed land mortgage banks, land courts, and a state-enforcing police power to create the conditions for buying and selling land. Such institutional development could be relatively painless if existing institutions could be extended into the titling area. Otherwise, a very significant investment must be made over a long period of time in setting up such agencies.

In other countries, the state might act in a "market-complementing" way, providing only a public guarantee of the validity of land titles, something akin to the Torrens system in some countries. In such cases the state does not participate in the creation of markets in land but rather acts as a guarantor of the validity of the transactions undertaken.

One of the functions of an effective land tax is to complement and at times stimulate the land market, the argument being that a tax will provide an incentive for landowners to use the land productively or put it on the market (Strasma 1965; Sazama and Davis). However, the administrative structure necessary to assess all property periodically, maintain up-to-date cadastre roles of landowners, and actually collect a significant tax has proved difficult to install in most Latin American countries.

The third level of involvement of the state would be as a "market-replacement." Examples of such functions are the reservation of certain land to public uses not accessible to private dealings, such as public parks, or lands where private dealings and uses are severely restricted, such as wetlands, coastal beaches, historical neighborhoods, greenbelts, industrial parks, and floodplains. In such areas the uses of land are not determined by the marketplace either directly or indirectly but rather by the political-bureaucratic process of reaching consensus about its use. Only in countries with a strong tradition of independent public administration and pluralist debate and an institutionalized recognition of the limitations on the concept of property can such functions be implemented.

3.2 Private Title, Farm Production, and Farmer Investment Behavior

The "exclusionary" function of land titles defines the relation between the titleholder and other people or agencies who previously had, or under other conditions could have, some claim to the land in question. Very often land titling programs have optimistically expected that the extinguishing of certain claims to land--communal claims, or private, semi-feudal latifundista claims, or nonusers of the land--in favor of an individual holder (usually in small family-sized parcels) would lead to great improvements in resource use and/or increased production from the land. (See Demsetz for a summary of these arguments.) Much of the energy behind the expropriation of latifundia has been based on this expected relationship between the creation of owner-operated farms out of large haciendas and improved agricultural production. The main link between the acquisition of title and improving production is the increased availability of capital, usually credit.

The nature of land distinguishes it from other types of property in that it is (1) immovable and (2) everlasting, at least in legal theory (see Simpson 1976). According to Western legal theory, land cannot be carried around, hidden, or even destroyed, but rather is "a segment of the earth continued into outer space, . . . as unchangeable in extent as the earth itself." This makes land a special property, particularly useful as security for a loan since it cannot be "carried off and fraudulently hidden or disposed of." The use of land as security is of importance where sources of investment capital exist and require mortgages, and where investments of capital can produce a sufficient return. Holdings without titles are usually inadequate as security for loans, even though property interests may be locally recognized. The degree to which the state's property-support legal system is developed will determine the importance of a title to land, but in most countries in Latin America possession of a recognized title to land makes it a peculiarly apt commodity for securing a loan.

The expectations regarding the role of secure title in agricultural enterprises can be summarized as follows:

- 1) A secure title enables the farmer to use the land as collateral for securing loans from financial institutions. (See Dorner and Saliba.)
- 2) The possession of a secure title provides the farmer with incentives to invest in the farm by increasing the probability that the capital which he accumulates will provide him or her with future benefits. (See Raup.)
- 3) With this combination of increased ability to secure operational and long-term capital and the farmer's increased incentive to use this capital in the farm enterprise, farmers with secure title will actually increase their long-term capital investments as well as their purchase of production inputs.
- 4) With higher investments and greater use of production inputs, the value of production per hectare will be higher for the holders of secure title than for those without such title.

These expectations are obviously highly simplified but do seem to be the basic rationale for many titling programs.

Assuming that investment and production funds are available, generated on the farm either from nonfarm activity or from formal or informal credit institutions, there are several factors which affect the investment decisions of farmers apart from whether or not they have secure title to the land they work. Such factors include:

- a) alternative investments which the farmer might consider more attractive for the opportunity capital he might have or acquire;
- b) the quality and quantity of land he holds (see Seligson 1982);
- c) the accessibility of production inputs such as water, seeds, labor, fertilizers, markets, and managerial skills;

- d) the farmer's present debt structure (the more he owes, the less likely a title will help him get more);
- e) the farmer's perception of how secure the title is; and
- f) the objective and subjective favorability of farm production and land prices which in turn influences the overall profitability of farming and the availability of investible capital.

Clearly the strong presence or absence of any of these farm enterprise factors could overshadow the desired effects of granting a secure title. Many programs have assumed away these factors and either benefited or suffered unduly. The assumption that credit is available should also be examined, especially in areas without banks willing to loan funds, or with such agencies but with transaction costs so high as to discourage particularly the small farmers from applying for loans. Under such conditions a title to land may not overcome the obstacles to getting access to institutional credit and may oblige the farmer to use informal sources, which typically do not require land as collateral.

3.3 Private Title and Social Costs

The extinguishing of communal and even private claims to land through a titling effort may produce undesired outcomes, such as substantial social inequity and conflict, if the redistributed claims to land are highly unequal, if the previous claims are not in some way compensated for, or if the social obligations of the new property holders are not clearly defined and enforced. The displacement of peasant producers from communal lands in the early 1900s in the Dominican Republic and the substitution of legally titled sugar estates produced radical changes in production, but it is clear that the welfare of those displaced from the land decreased. (See Betances.) An important aspect of land titling programs, then, has to do with their social costs, i.e., the dislocations and costs which can be produced by overly emphasizing the exclusionary nature of land titles.

A common form of group tenure in the Caribbean, "family land," has been undergoing transformations in recent years, mostly involving individualization of claims. There has as yet been little serious study of family land in the Caribbean. (See Bruce for the legal and historical origins of this tenure form.) It apparently emerges under conditions of highly valued land of limited supply and with a substantial emigration of people for part of their working life. In much of the Caribbean as well as in other areas, this and other forms of tenure may be affected by the introduction of programs to legalize titles or to favor individual forms of tenure.

As Bruce has pointed out, the determination of social costs of private titling of previously communal or family lands may be of critical importance along several dimensions.

a. Family decision-making

The family is the most important institution in most countries and, in the rural areas, perhaps the only vital one. What Clarke notes of

Jamaica is equally true of many countries: "the strength of the kinship group is associated with ownership of land and the customary procedure of transmission with its implicit acknowledgment of responsibility for all children" [1953:83]. Despite this phenomenon, there has been little systematic study of the family institution in and the associated form of family land tenure. Individual titles to land may lead to a weakening of family bonds, increased level of disputes, and overall decreased welfare of the family members who are deprived of their access to land.

b. Succession situations

This is perhaps a specific segment of the previous question but is central and deserves emphasis. Smith's work on Carriacou would serve as a model for inquiring into the impact of individual fee-simple titles on traditional arrangements for passing land from one generation to another.

c. Smallholder land acquisition strategies

Examination of institutions and how they mediate land claims should be supplemented by examination of the individual farmer's perspective on land acquisition--how the farmer puts together a viable mixed-tenure farm. Under some conditions the acquisition of titled land may be economically disadvantageous by depriving the new holder of resources previously shared with others on a sharecrop or rental basis.

d. Expulsion of unentitled occupants

Typically, titling programs follow custom or local legal codes which may be inherently discriminatory. Often they exclude from property rights "widows" who are not legally married, illegitimate children, and descendants of illegitimate children. To what extent and in what circumstances does this exclusion occur? What steps can be taken to secure occupancy rights or to compensate for their removal?

3.4 Titling and the Stability of the Farm Enterprise

Titling of land means that the state provides some means for the recognition of certain rights in land. When these rights are property ones, the right to sell is of primary importance. Yet in most cases, ironically, there are typically some restrictions placed on the right to sell for a certain number of years. In the U.S. homestead experience, the claimant had to work the land for five years before he got clear property title. In Salvador, the claimant has to hold the land for twenty years before being permitted to sell. The primary purpose of such restrictions is to give more stability to the titling effort and to those enterprises created, often at great public expense and effort. The private danger is that speculation in land will swamp the desired production of land and, on the other hand, that such speculative dealings could result in the creation or recreation of a landed aristocracy, which is often the very target of the land titling effort in the first place. Stability of the titled enterprise is, then, of central importance.

A central operational question about stability is exactly how much land to title to any given individual or family. Even the programs that give collective titles have to estimate the holding capacity of the property being titled. Except for the cadastral survey type of titling program which aims to determine only the extent of existing holdings, most other titling programs have to decide on how much land to title. In land-to-the-tiller programs, which title the land being used at a particular moment by the individuals eligible for such land, the assumption often is that the individual uses only a particular piece of land each year, when in fact he may shift his cultivation from parcel to parcel within the larger hacienda, using the fallow periods to help maintain the fertility of the soil. If the amount of land titled is only that used in any given year, the land area available to the new titleholder may be only a fourth or fifth of the area to which he previously had access. Much of the minifundization of land in the Ecuador land reform and many of the feared future instability problems in the Salvador reform have resulted at least in part from this underassignment of land to the newly titled holder.

In a 1982 survey of the beneficiaries of the land-to-the-tiller program in El Salvador, questions were asked about their production and inputs into that production process. As might be expected, there is a direct linear relationship between the amount of land cropped and the total value of production in colonos (if we look at those cases where some harvest was possible). The equation was:

$$\begin{aligned} \text{Value of Agricultural Production} &= \\ &\text{¢439} + \text{¢378 (land area cropped*)}, \\ &\text{with an R of .55 for 1,068 farms.} \end{aligned}$$

Determining the amount of land to title to each holder is critical if the program hopes to make the resulting enterprises viable over the long term. In the Salvadoran case, by extrapolating the survey data it appears that, in order to produce all the family's income from the titled parcel, the area cropped should be at least 5.5 manzanas, or about 10 acres. In the survey, only about 15 percent of the title recipients cropped at least that amount of land. The titling effort is obviously of great immediate importance for providing the former renters with some subsistence and cash income. However, with most titled parcels being less than that needed to survive as a family farm enterprise, the viability of the newly titled farm is of some concern.

A comparison of this parcel size factor can be made between the titling presently under way in Nicaragua and Salvador, recognizing that the population densities and other features of the two countries are very different. It appears that in Nicaragua a substantial effort is being made to distribute private ownership titles to lands previously held by Somoza and others along the Honduras border. In Salvador, the land in question was previously rented.

* On the average, 1.5 harvests were taken from each manzana of land of multiple cropping.

In Nicaragua the distributed titles are both cooperative and individual, with more land being titled cooperatively, although in the case of these cooperative titles it appears that de facto individual farms are being created, something like that done in the Dominican Republic. In Salvador the bulk of the newly titled farms are individual, although some lands are being titled to cooperatives. At any rate, in Nicaragua a total of 266,000 ha. have been distributed to about 24,200 people, for an average of about 11 ha. per person. In Salvador about 80,000 ha. have been distributed to 54,000 people, for an average of about 1.5 ha. per person.* Assuming similar land and climatic conditions, these figures would imply a substantially more favorable land base and thereby more stable farm enterprise for the Nicaraguan titling effort.

In the best of worlds, the initial expectations and plans for programs involving land titling may prove to be more or less correct during the first few years of the program. However, the dynamics of property systems are difficult to predict over a period of 20-30 years or more. Where public lands, communal or group tenure forms have been extinguished by private land titling, unless strong credit and technical support are also provided, the tendency will probably be for the newly titled to sell their lands in times of economic stress. Such stress was a major problem in the U.S. homesteading experience, with many of the original owners selling out and becoming workers or tenants on lands they had previously owned. (Hibbard comments on this problem, but more dramatic evidence is presented in the 1937 Report to Congress of the Special Committee on Farm Tenancy.) Someone once remarked that the best way to separate a peasant from his land is to give him a free and clear title, meaning that market, political, and other pressures may dislodge the titled farmer from his lands over a period of years.

The consolidation of holdings might be a "natural" result of the economic forces eliminating the inefficient producers, but it is certainly not usually part of the objectives of titling programs. The situation in Chile provides some recent evidence on this point, as reported in a 1980 book by Cereceda and Dahse. Out of the almost 900,000 basic irrigated hectares (BIH) expropriated by the Frei and Allende governments through 1973 and organized in group farms, after the Pinochet takeover, 52 percent were actually titled to agrarian reform beneficiaries. The remainder was returned to previous owners or sold at auction. By 1978, 173,000 BIH which had been titled had either been sold or rented (37 percent). It is likely that this process of alienation of the land has continued, since in 1980 all restrictions on the selling of parcels were removed.

Even supporters of the Chilean military regime have concluded that this consolidation process is not due in the main to poor management by the parceleros or to poor land or other farm-related factors, but rather to the state's channeling of credit and other resources only to the large, export-oriented,

* Information on the Nicaraguan titling program is difficult to secure (the above-mentioned figures are based on newspaper accounts), while there is substantially more information on the Salvadoran effort. Conditions in both countries make quantitative judgments difficult.

agro-industrial farm enterprises. Little or no resources were channeled to the reform-titled farmers. In this and other cases, the generality of the phenomenon of rapid turnover of land which has been recently titled deserves some attention, as do the reasons for such a dynamic and what factors seem to influence its rate.

Conclusion

In this paper I have attempted to define some basic concepts and theoretical expectations of programs which involve titling of land in South and Central America and the Caribbean. At the same time, I have pointed out four types of problem which might affect the desired outcomes of such programs:

- 1) inefficient or inadequate land information systems may make the titling effort too costly or lead to an underutilization or decay in the value of title;
- 2) farm enterprise-related factors may negate the desired effects of titling;
- 3) the extinguishing of previous communal or family claims to land may be socially disruptive; and
- 4) market or other forces may lead to an instability of the titled properties and eventually undermine the titling program.

These cautions are of course not absolute nor meant to imply that titling should not be undertaken. Titling will be done one way or another in countries with private property systems. The difficulties mentioned merely imply that seriously considered steps should be taken to assess the importance they may have in any given situation and to counteract them when necessary.

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