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The Evolution of the World Bank's Land Policy: Principles, Experience, and Future Challenges

Klaus Deininger • Hans Binswanger

This article examines the evolution of policy recommendations concerning rural land issues since the formulation of the World Bank's "Land Reform Policy Paper" in 1975. That paper set out three guiding principles: the desirability of owner-operated family farms; the need for markets to permit land to be transferred to more productive users; and the importance of an egalitarian asset distribution. In the 25 years since that paper was published, these guiding principles have remained the same, but it is now recognized that communal tenure systems can be more cost-effective than formal title, that titling programs should be judged on their equity as well as their efficiency, that the potential of land rental markets has often been severely underestimated, that land-sale markets enhance efficiency only if they are integrated into a broader effort at developing rural factor markets, and that land reform is more likely to result in a reduction of poverty if it harnesses (rather than undermines) the operation of land markets and is implemented in a decentralized fashion. Achieving land policies that incorporate these elements requires a coherent legal and institutional framework together with greater reliance on pilot programs to examine the applicability of interventions under local conditions.

In the rural areas of most developing countries, land is not only the primary means for generating a livelihood but often the main vehicle for investing, accumulating wealth, and transferring it between generations. Thus the ways in which access to land is regulated, property rights are defined, and ownership conflicts are resolved has broad implications beyond the sphere of agricultural production. These regulations, rights, and procedures affect not only the ability of households to produce for their subsistence and for the market but also their social and economic status (and often their collective identity), their incentive to work, their willingness to use the land sustainably, and their ability to self-insure or to obtain access to financial markets.

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The importance of land issues in fostering economic growth and reducing poverty was the impetus for the World Bank's 1975 "Land Reform Policy Paper." At the time, this dialogue was complicated both by an economic environment in which government interventions often caused the prices of rural land to deviate significantly from the net present value of agricultural profits and by a political context in which land was at the heart of a broader ideological struggle. In many developing countries today, far-reaching macroeconomic reforms have removed distortionary policies, the ideological divide has narrowed or disappeared, and the need to tackle structural issues has greatly increased the demand for policy advice. These considerations provide an opportune moment to review earlier policy recommendations and to use experience to assess the role of such policies in the broader process of development. This article reviews the analytical underpinning for policy recommendations and examines the effectiveness of such advice in the areas of tenure security, land markets, and land reform.

The broad consensus underlying current thinking about land issues can be summarized in four key principles:

- The desirability of owner-operated family farms on both efficiency and equity grounds
- The importance of secure property rights to land in eliciting effort and investment and in providing the basis for land transactions
- The need for a policy and regulatory environment that promotes transfers to more efficient land uses
- The positive impact of an egalitarian asset distribution and the scope for redistributive land reform where nonmarket forces have led to a highly dualistic ownership and operational distribution of land, that is, a distribution characterized by very large and very small holdings.

Although these principles remain valid, experience with land reforms challenges earlier assumptions in four areas. First, the 1975 World Bank land reform policy recommended that communal tenure systems be abandoned in favor of freehold titles and the subdivision of the commons. Today it is recognized that some communal tenure arrangements can increase tenure security and provide a (limited) basis for land transactions in ways that are more cost-effective than freehold titles. Where that is the case, governments may find it useful to reduce the cost of cooperation, improve accountability, and facilitate a gradual evolution of communal systems to meet emerging needs, possibly for greater individualization of property rights over time.

Second, although individual titling has great potential to increase investment and productivity, several preconditions must be satisfied for this to be a desirable intervention. The circumstances under which title is conferred are important; for example, titling should be area-based (that is, it should cover an entire area at once)

and fit within a broader strategy of rural development. Otherwise, imperfections in other factor markets may undermine or even eliminate the advantages from possession of title, at least for the poor.

Third, the earlier skeptical view of land rental markets has given way to a recognition of their critical role as a means for providing the poor with access to land. The removal of remaining restrictions on land rental is therefore a top policy priority. In contrast, however, removing the restrictions on markets for land sales may not be the most urgent requirement for increasing efficiency—and may have a negative impact on equity. Measures thus should be sequenced properly, emphasizing rentals rather than sales, and should be integrated with the development of other rural factor markets.

And fourth, a growing literature has made the case for redistributive land reform on efficiency and equity grounds. Most of the land reforms undertaken during the last 20 to 30 years, however, were politically motivated and have not lived up to expectations. Recently, a new approach has emerged: encouraging community-managed agrarian reform based on voluntary negotiation. Provided that careful monitoring permits officials to make the necessary changes in program design and that political pressures to provide free handouts to influential lobbies can be resisted, this approach can help to overcome long-standing problems of asset distribution and social exclusion, which are key factors leading to rural violence.

In addition to such changes in specific recommendations, land policy is increasingly viewed as an integral element of a broader development process rather than as a string of narrowly oriented technical interventions. This view is based on experience showing that a lack of consensus on the broader subject of land policy has often compromised the effect on development of specific interventions, such as land titling. In countries where land issues have in the past resulted in civil strife, revolution, and war, reaching a consensus requires time and involves all the relevant sectors of civil society. Initiating such a process, ensuring its integration into a broader framework of rural development initiatives, and strengthening the analytical capacity of key players have become important components of the World Bank's approach to land issues. At the same time, the political sensitivity of such issues and the need to adapt to site-specific conditions often dictates that specific approaches be explored on a small scale before they are implemented broadly.

The Conceptual Basis of the World Bank's Land Policy

A stylized fact, confirmed by a large literature, is that owner-operated smallholder farms are desirable from both an equity and an efficiency perspective. Secure individual property rights to land would therefore not only increase the beneficiaries' incentives and provide collateral for further investment but, if all markets were competitive, would automatically lead to socially and economically desirable land mar-

ket transactions. The arguments advanced in favor of secure property rights are based on three observations.

First, clear property rights can prevent wasteful "overinvestment" in protective measures by individuals eager to claim and defend their property rights. As Malik and Schwab (1991) point out, property rights are a public good, and in the absence of public enforcement of these rights, individuals will overinvest in protective measures to claim and secure their rights. This privately optimal spending will be inefficient from a social point of view, particularly if the claim is secured through negative environmental externalities, as is the case in many frontier situations (Alston, Libecap, and Mueller 1999; de Meza and Gould 1992; Feder and Feeny 1991). Government regulations have often directly encouraged such behavior (Binswanger 1989).

Providing farmers with residual rights to production, even if these are only temporary, will increase the incentive to clear and cultivate land, as illustrated by the tremendous increases in output and productivity associated with the transition from collective to individual (usufruct) rights in China (Lin 1992; McMillan, Whalley, and Zhu 1989). The link between secure ownership rights (although not necessarily a formal title) and investments in farm improvements also emerges in evidence from Burkina Faso (Brasselle, Gaspart, and Platteau 1997), China (Jacoby, Li, and Rozelle 1998; Yao 1996), Ghana (Besley 1995), and Niger (Gavian and Fafchamps 1996).

At the same time, the lack of enforceable—though not always formal or individual—property rights has been associated with the unsustainable use and degradation of natural resources. A breakdown in the ability of communities to enforce rules governing the use of communally held land and the inefficiency of collective forms of production (Deininger 1995) were at the root of environmental degradation in Mexico (Key and others 1998; McCarthy, de Janvry, and Sadoulet 1998).[1] Even in situations where individual property rights are infeasible, helping communities develop structures that overcome these coordination problems and establish effective property rights can enhance the sustainability of resource use, prevent environmental degradation, and promote the overall efficiency of land use (Baland and Platteau 1996).

A second issue relates to credit access. In addition to increasing demand for investment, as discussed above, secure landownership and the associated ability to use land as collateral can increase the supply of credit from formal sources. This can also contribute to the evolution of financial markets in more general terms (Alston, Libecap, and Schneider 1996; Carter and Olinto 1996; Feder and others 1986; Lopez 1997).

A third benefit is that written records of landownership improve the transferability of property. By reducing asymmetric information about landownership and quality, land transactions are less costly to implement, thus increasing the liquidity of the land market and making it possible to transfer land from less productive to more productive individuals. The ability to transfer land may be of limited importance, however, in the early stages of development, when nonagricultural opportunities

and regional migration are limited, and in marginal environments, where economic opportunities are more constrained. The importance and value of being able to transfer use or ownership rights to land increase with economic development, specialization, and better-functioning markets, and one would expect the transferability of land brought about by better-defined property rights to be of increasing relevance with higher levels of population density and nonagricultural development. Indeed, in coastal China, more secure transfer rights are associated with higher allocative efficiency in the economy (Yao 1996).

Given the distribution of agricultural production and the need (especially at low levels of technology) to adjust constantly to variations in the environment, owner-operated farms have an advantage over large operations, which are associated with the large agency costs entailed in managing wage labor (Jensen and Meckling 1976). Conceptually, it has long been recognized that supervisory capacity is an important determinant of the mode of operation of large tracts of land (Eswaran and Kotwal 1985a, b; Feder 1985). Empirical evidence indicates not only that hired labor is less productive than family labor but also that the intensity of supervision matters (Frisvold 1994). A large number of studies based on aggregate or cross-sectional data confirmed the existence of a negative relationship between farm size and productivity for all but the smallest farms (Benjamin 1995; Berry and Cline 1979; Carter 1984; Kutcher and Scandizzo 1981; Newell, Pandya, and Symons 1997). The relationship weakens if adjustments for soil quality are made (Benjamin 1995; Bhalla and Roy 1988). Still, several studies using panel data with household- or plot-specific effects show a negative relationship between farm size and productivity that is likely to originate in labor market imperfections of the kind mentioned (Burgess 1997; Olinto 1995; Udry 1996).

Economies of scale and imperfections in other markets can outweigh the cost advantages of owner-operated farms. Scale economies can arise from the use of machinery and the advantages of professional management and marketing, the use of which would lead to declining average costs with firm size.[2] Empirically, the indivisibilities associated with machinery rarely increase optimum farm size beyond the level at which, with existing technology, the labor of a family (possibly complemented by hired labor for specific seasonal tasks) is fully utilized. Even where they would, rental markets can help to overcome this indivisibility, at least to some extent. Most empirical studies (for example, Burgess 1997 and Feder and others 1989 for China, Lanjouw 1995 for India) are therefore unable to reject the hypothesis of constant returns to scale in agricultural production.

The number of cases in which true technical economies of scale apply is therefore limited. One example is plantation crops, such as bananas, sugarcane, and tea, where production is often organized on a scale that corresponds to the optimum scale of the processing factory. Even in this case, however, the supervision advantages of owner-operators have frequently led to the adoption of contract grower arrange-

ments (Glover 1990). Economies of scale in processing or marketing are therefore important for the size of farming operations only so long as markets for outputs and inputs are either unavailable or malfunctioning.

Imperfections in other markets, such as lack of access to capital and insurance markets, put small farms at a disadvantage. Their limited ability to cope with risk could offset the cost advantage that small family farms enjoy. For example, in the Sudan, capital market imperfections led to a positive relationship between farm size and productivity (Kevane 1996), while Burkina Faso recorded an inverse farm size–productivity relationship (Udry 1996), and in other contexts an optimum farm size emerged (Carter and Mesbah 1993). To the degree that imperfections in those markets, rather than an inherent productivity advantage of large farms, are at the source of differences in the shadow price of land across categories of farm size, improvements in these markets through regulation, better information, or cooperatives to reap economies of scale or input supply could lead to productivity gains.

The Importance of Land Market Transactions

That well-functioning land markets can promote efficiency-enhancing land transfer is well recognized. The extent of such land transfers is affected by government policies, informational constraints, and incomplete credit markets and their impact on land prices, producers' ability to access financial markets, and transaction costs associated with land rentals and sales.

Land Price Formation

Mortgaged land cannot be used as collateral for working capital. Thus the borrower would not reap the production credit advantage and would be unable to repay a loan from the income generated from the land. In addition, the value of the ability to use unmortgaged land as collateral in formal credit markets would be capitalized into land prices, and the equilibrium price of land at given credit costs would exceed the present discounted value of the income stream that can be produced from the land (Binswanger and Elgin 1988; Just and Miranowski 1988). Credit subsidies, tax advantages, and the use of land as an inflation hedge would have the same effect. The only income stream available to the poor for consumption is the imputed value of family labor. The remainder of the profits would have to be used to pay for the loan, reducing the purchaser's utility below what could be achieved in the labor market and implying that land purchases would normally have to be financed out of household savings. Even if credit access were perfect, mortgage-based land acquisitions would be unlikely to lead to redistribution in favor of landless households (Binswanger and Elgin 1988). Any additional subsidies, tax advantages, and other factors that

further increase land prices above the net present value of agricultural profits would, of course, further reduce the scope for participation of the poor (Gunjal, Williams, and Romain 1996).

Credit Market Imperfections

The same credit constraints that make it difficult for landless farmers to finance the purchase of land also affect their ability to pay for land in the rental market. Credit rationing reduces their ability to make productive use of land, possibly outweighing the advantage of owner-operated farms, reducing their reservation price for land, and possibly leading to (relatively inefficient) rentals to large producers.

One outcome of these difficulties is that smallholders are forced to adopt costly (and relatively inefficient) insurance substitutes to enable them to deal with unexpected productivity and idiosyncratic shocks, such as adjusting their crop and asset portfolios to a low-return, low-risk combination that reduces their vulnerability. Another possibility is to replace land with a more liquid asset such as grain, which even though less productive, would provide them with greater security in case of subsistence risk (Zimmerman and Carter 1999). Indeed, for India, Rosenzweig and Wolpin (1993) show that the lack of insurance substitutes affects farmers' investments. Despite this less-than-optimal allocation of assets, small farmers are still more productive than large farmers (Rosenzweig and Binswanger 1993). Dercon (1996) and Dercon and Krishnan (1996) find that in Africa the levels of liquid assets and capital available to the household determine its ability to enter into high-risk but high-return activities.

The market for land is also affected by credit market imperfections that deny smallholders insurance against shocks, such as bad harvests or accidents, and may force them to sell off land in periods of distress. Where the covariance of weather risks would imply wide fluctuations of land prices over time, it is hard or impossible for smallholders to recover from those asset losses because they would have to sell at low prices during disaster (when there is little effective demand) and buy during normal times, when prices are high again (Bidinger and others 1991). In research on Bangladesh and India, Cain (1981) illustrates this view that transactions in the land sales market are driven by credit and insurance limitations rather than by cultivators' productive efficiency. He finds that in villages that had access to a safety net program, farmers generally sold land in response to shocks and to obtain cash for major investments such as drilling wells, purchasing pumps, and educating and marrying their children. By contrast, where such consumption-smoothing devices were absent, the majority of sales were prompted by distress (to obtain food and medicine). Whether or not households were able to buffer consumption during crisis situations had a significant impact on whether markets helped to equalize or disequalize land endowments. Indeed, distress sales have not only played a major role historically but

also are linked in the literature to the elimination of traditional mechanisms for coping with risk (Kranton and Swamy 1997).

Transaction Costs and Incentive Issues

Because land is immobile, land markets are localized, with several important consequences. As Balcazar (1990) and Carter and Zegarra (1995) note, land sales markets are normally highly segmented, especially in countries with a dualistic distribution of ownership and where sales by large farmers to smallholders are virtually absent. One explanation is that it is costly to subdivide large farms so as to make them suitable for smallholder cultivation. Similarly, as noted earlier, transaction costs either discourage small land transactions or drive them into the informal market.

Further, even though land rental markets do not permit perfect adjustment to the desired size of operation (Skoufias 1995), the transaction costs incurred are smaller than in land sales markets. There has, however, been long-standing concern about the scope for incentive issues to lead to efficiency losses in rental markets. Under a land rental arrangement, tenants have few incentives to undertake long-term investments unless they receive the value of the investment back during the rental term or at its end (in the form of compensation). Moreover, with share tenancy, that is, in situations where the landlord receives a share of the harvest as rent, tenants receive only a fraction of their marginal product. It is therefore difficult to motivate tenants to work hard enough, a phenomenon that is known as "Marshallian inefficiency." Share tenancy arrangements are still more efficient than wage labor, however. They may be an "optimal choice," given the constraints faced where markets for credit and insurance are incomplete. For risk-averse tenants (where risk aversion can arise out of the need to satisfy a minimum subsistence constraint), a share contract can provide insurance against fluctuations of output and income (Cheung 1969). For landlords, share tenancy insures against rent default by tenants whose wealth is insufficient to pay the rent or who, because they are credit constrained, underuse inputs (Shetty 1988). Thus the poorest tenants often receive wage contracts, while richer individuals (who have a lower risk of default) cultivate under share contracts with progressively increasing tenant shares; fixed-rent contracts are limited to wealthy farmers (Laffont and Matoussi 1995; Lanjouw 1995; Shaban 1991).

The degree to which policymakers need to be concerned about preventing efficiency losses from share tenancy contracts depends on the magnitude of this inefficiency. Although different methodologies produce widely diverging results, Shaban (1991) indicates that the losses may be relatively modest—about 16 percent. Thus even if the government imposed regulations to replace the tenancy system with more efficient forms of production, the impact is likely to be modest. The case for government intervention is further reduced because inefficiency decreases with monitoring

and social control, that is, by embedding share contracts in long-term social or kinship relationships. In fact, Sadoulet, de Janvry, and Fukui (1997) find that share tenancy contracts between kin (but not between others) were not associated with any disincentive effects. The study of the efficiency implications of contracts should therefore be complemented by a focus on the contracting parties' opportunities outside their specific contract and on possible changes in the economic environment that might lead to the adoption of different types of contracts (Mookherjee 1997).

Implications for Land Sales and Rental Markets

When the 1975 land reform paper was written, policy advice focused on land sales markets to achieve efficiency-enhancing transfers of property and took a decidedly negative stance toward rental markets for land. If other markets are imperfect, however, as noted above, sales may be less efficient and less equitable than rentals. Even where attempts to liberalize markets for land sales are embedded in a well-sequenced program of integrated factor market development, land sales may not be the most important constraint on higher productivity, and their liberalization may not be an immediate priority.

Consider the effect of land transfers in rental markets. By renting out, landowners would not forgo possible benefits from credit access associated with land ownership (and could even advance the credit thus obtained to a credit-constrained tenant under an interlinked contract) and would at the same time benefit from any efficiency advantage of the tenants' family labor. Credit market imperfections tend to affect rental markets less than they do sales markets; moreover, rental markets are associated with lower transaction costs and generate positive externalities by facilitating the acquisition of agricultural knowledge by the tenant and adaptation to changing labor availability. Thus, rental markets may contribute more to efficiency than sales markets (Carter and Olinto 1996). Governments should therefore aim to create conditions conducive to the development of rental markets, rather than implicitly or explicitly restricting the scope for tenancy, as they have often done in the past.

Land Reform

The World Bank's 1975 policy paper strongly supported redistributive land reform on equity and efficiency grounds, pointing to the success of Asian land redistribution and the Kenyan "million-acre scheme," which redistributed land from European settlers to African farmers. The practical difficulties associated with implementing land reform notwithstanding, the conceptual attractiveness of such a policy rests on three pillars.

First, in situations where credit and product markets are incomplete, access to land can make a significant contribution to food security, households' nutritional well-being, and their ability to withstand shocks (Bardhan, Bowles and Gintis forthcoming). Evidence from China, where land was distributed largely independently of economic status, suggests that even though access to land insures household income only moderately against shocks, it provides almost complete insurance against malnutrition (Burgess 1997). Second, landownership affects economic growth and poverty reduction through credit-financed investment. The underlying idea is that the lack of collateral precludes landless individuals from making investments (in education, livestock, wells, and so on) that would require credit, even though the investments would profit both the individual and society (Eckstein and Zilcha 1994; Galor and Zeira 1993). Poor people who do not have access to assets might remain impoverished not because they are unproductive or lack skills but because they never get the opportunity to utilize their innate ability (Fafchamps and Pender 1997; Jalan and Ravallion 1997). And finally, several studies have argued that a more egalitarian distribution of assets (not necessarily land) would improve political stability. Because this issue does not relate directly to land issues, we refer the reader to the literature on this topic.[3]

The ease of actually implementing land reform has varied considerably between "landlord estates," which had been cultivated by tenants, and "haciendas," whose tenants received a small plot of their own in return for working on the landlord's farm. In landlord estates, all that is required is a reassignment of property rights; land reform is generally easy to implement, and stable systems of production emerge. Since the end of World War II, landlord estates in Bolivia, large areas of China, Ethiopia, eastern India, Iran, Japan, the Republic of Korea, and Taiwan, China, have been transferred to tenants in the course of successful land reforms. The productivity gains associated with these land transfers were modest in cases where security of tenure had already been high, where cash rent (rather than share rent) contracts had prevailed before the reform, and where landlords had provided tenants with market access (and no substitute was available). Both welfare and productivity increased where investment opportunities were available (Callison 1983; King 1977; Koo 1968), where land ownership enabled the new owners to access markets for credit and insurance that had previously been beyond their reach (Dorner and Thiesenhusen 1990), and where new technology could be readily adopted (Otsuka, Chuma, and Hayami 1992).

By contrast, land reform in hacienda systems has been very difficult, and the "game of Latin American land reform" has been declared lost (de Janvry and Sadoulet 1989). In the great majority of these systems, large landowners responded to the threat of land reform by evicting all hired workers or tenants who could have claimed ownership under a reform program. The landlords either switched to livestock production and ranching or—aided by significant credit subsidies—shifted to highly mechanized cultivation (Binswanger, Deininger, and Feder 1995). As a result, programs of

redistributive land reform reached far fewer people than intended and were often accompanied by a decline in tenant welfare that may have outweighed the benefits of the programs. Several factors account for this lack of success.

First, if land is transferred from large to small farmers through government programs, the ability of the latter to make economically productive use of this asset is contingent on a change in the pattern of production, subdivision of the farm, and construction of complementary infrastructure. Second, because the main productivity advantage of land reform is linked to the increased incentives of owner-operators, it is important not only to avoid collective forms of production but also to ensure that owners operate their own farms. Third, beneficiaries are unaccustomed to making independent entrepreneurial decisions, an ability that is particularly important to make individual family farming a success. In many cases in which the farms acquired under a land reform program were not farmed at full capacity, the lack of funds for pastures, fencing, and so on or for startup capital was often the reason for the lack of success. Similarly, programs that were limited to transferring land to existing workers without providing those workers with complementary investment, training, technical assistance, and resources were generally associated with very limited equity and efficiency benefits.

Without access to credit markets, land reform beneficiaries may well be worse off than they had been when the landlord provided them with inputs and possibly even credit for consumption smoothing (Guinnane and Miller 1997). Restricted access to credit together with insecure property rights led beneficiaries of land reform in Nicaragua (Jonakin 1996) and the Philippines to sell off their new holdings—often at prices well below the productive value of the land. The key to avoiding such an outcome is the ability to access output and financial markets (Brooks and Lerman 1994). Arrangements where financial intermediaries provide input credit and help with marketing of the farm produce have in some cases helped beneficiaries overcome the obstacles posed by market imperfections (Deininger 1999).

Implications for Policy: Communal Tenure Systems

Communal tenure systems are dominant in most countries of Africa, in China, in indigenous areas in Latin America, and in Mexico. When the community rather than the individual owns the land, whatever market exchanges (sale or rental) exist are normally limited to the community. Individuals have very secure and normally inheritable rights to land even after a period of absence, but they do not have permanent property rights to a specific plot, a limitation that may reduce investment incentives. In some cases, communal systems also permit periodic redistribution of land by the village chief to accommodate population growth.

In the past, communal tenure arrangements were often considered economically inferior and equivalent to collective production. The establishment of freehold title and the subdivision of the commons were proposed to prevent the efficiency losses that were assumed to be associated with communal ownership. More intensive study of communal tenure systems in a broader framework and the recognition that these systems perform multiple functions has led to a reassessment of these recommendations, however.

On the one hand, the efficiency losses associated with communal tenure systems may be more modest than generally assumed, for a number of reasons. First, arable land (in contrast to pasture, forest, or fishing grounds) is, in most communal systems, cultivated by individuals who enjoy inheritable rights, which means that the static (and maybe even dynamic) efficiency losses possibly associated with communal tenure may be quite limited. Second, communal resource ownership is often maintained because it either provides public goods or takes advantage of synergies that would be difficult to provide under individual cultivation, including risk reduction through diversification (McCloskey 1991; Nugent and Sanchez 1993), economies of scale to help with seasonal labor bottlenecks (Mearns 1996), and investment in community-level infrastructure (Boserup 1965; Dong 1996). Third, when population density is low and the payoffs from land-related investments are limited, the investment disincentives associated with communal tenure are likely to be of little consequence because people do not tend to invest under either system of tenure. With arable land becoming increasingly scarce, many communal tenure systems either recognize a user's property rights if the land has been improved or compensate the user for improvements when the land is redistributed, thus attenuating tenure-related investment disincentives (Sjaastad and Bromley 1997). Finally, although communal systems prohibit land transactions with outsiders, rentals—and often even sales—within the community (and possibly beyond) are normally allowed, providing scope for efficiency-enhancing transfers.

On the other hand, in environments with low population density and limited access to infrastructure and markets, the costs of delimiting and enforcing boundaries for individual plots are high, so the economic benefits of formal titling may not offset the expenses involved. Indeed, in several African countries, titles that were generated at high cost have lost their value as landowners failed to keep them updated. Thus, in cases where there is no clear demand for demarcation of individual plots, communal titles that are administered internally in a transparent fashion could provide tenure security at a fraction of the cost of individual titles (Bruce and Migot-Adholla 1994; Heath 1992). Communal titles also might provide a more effective safety net to ensure against risks and substitute for more costly redistributive mechanisms (Burgess 1997). Thus, instead of reinforcing an often artificial dichotomy between private and communal rights or trying to privatize land rights to "modernize" land tenure in an environment where few of the conditions for such moderniza-

tion are present, policymakers should focus on ways to increase secure property rights within given constraints.

More secure land rights may be highly valued by cultivators even under conditions of relatively low population density. For example, in Zambia (with a population density of 12 people per square kilometer and where 75 percent of the land is suitable for farming), almost 50 percent of farmers feel their land tenure is insecure and would be willing to pay something (US$40, on average) for land titles (Deininger and others 1998). Disputes, efficiency losses arising from limiting transfers and barring certain groups from land rights, investment disincentives, and land grabbing in anticipation of future appreciation are all indicators that existing land rights are inadequate. Clarification and formalization of informal property rights in a process that increases the accountability of local leaders, establishes a transparent and implementable legal basis, and provides for adjudication of boundary disputes across communities must precede any effort to award formal titles. Adopting a flexible institutional structure that gives communities freedom of choice in accomplishing these goals is therefore of great importance. The draft land policy adopted by Zimbabwe provides a good example in this regard (Zimbabwe 1998).

In countries where land ownership has traditionally been vested in the state, policymakers are concerned that a shift to individual land ownership is likely to lead to an undesirable reconcentration of land ownership. Experience suggests that this concern can be accommodated without forgoing major productivity benefits by giving producers long-term tradable leases rather than full ownership rights. For example, the household responsibility system in China (which gave 15-year lease rights and at the same time made individuals residual claimants to output) has led to tremendous increases in output and productivity. To increase investment incentives, the government has decided to replace the 15-year leases with 30-year contracts (Prosterman, Schwarzwalder, and Ping 1998). Because the degree to which earlier leases were honored varied greatly from village to village, inferences can be made regarding the impact of tenure security; studies find that more secure tenure did increase the level of investment (Jacoby, Li, and Rozelle 1998).

Establishing Formal Tenure Security

Land registration and titling have long been viewed as the main instruments for increasing tenure security, empowering a flourishing land market, and facilitating the use of land as collateral in credit markets. Although numerous studies have confirmed the positive impact of titling where the conditions are right, experience with World Bank projects has also demonstrated that titling is not a panacea for achieving a wide variety of divergent goals at the same time. The objective—whether it is to improve credit access, increase tenure security, or activate land markets—must be

clear. In addition, the ways in which individuals gain access to land before titling, whether through collective, communal, or informal means, as well as the broader trajectory of economic development, will affect the costs and benefits of specific titling instruments, their incidence across population groups, and the scope for public intervention.

Conceptual and Implementation Issues

Improved credit access has repeatedly been shown to be one of the major benefits from formal title. Thus, titling will confer the highest benefits where informal land transactions are common, a formal credit market that permits use of title as collateral exists, and profitable investment opportunities are available.[4] Title is unlikely to increase the banks' willingness to lend to the rural sector where, for cultural or economic reasons, land cannot be repossessed or where land sales and mortgages are restricted (Atwood 1990; Ensminger 1997).

Even if the above preconditions are satisfied, the effect of titling may vary across groups of producers, an issue that is of particular relevance if the initial distribution of land endowments is unequal. If the transaction costs associated with lending to specific groups of producers exceed the benefits they can derive from the use of credit, title would not be expected to increase credit access. In such cases, the title might make it easier for large producers to access credit but would not make small landowners creditworthy, a situation that would deepen preexisting inequalities. To prevent this and help titling contribute to broad-based growth, concurrent measures to improve access to credit markets, and possibly a differentiated scheme of recovering the costs of establishing title, will be necessary.

If a case can be made for formal titling, it must be systematic and areawide to take advantage of economies of scale in measurement, adjudication, and conflict resolution. Similarly, complementary infrastructure (such as programs to ensure access to credit markets) can be provided more easily and cost-effectively under an area-based program. To achieve equity, titling needs to be combined with a mechanism for resolving disputes on the spot and an information campaign explaining the legal background, the titling process used, the rights of different parties, the rules of evidence, and the benefits of the appeal process. If a decision is made to title on demand, the status of individual plots will still have to be investigated on a case-by-case basis, and any reduction in the transaction costs associated with titling will thus be minimal. Moreover, titling on demand has often had disastrous consequences for the poor because individuals with good political connections can often bypass the land rights of indigenous people, women, or other vulnerable groups (Bruce 1988; Platteau 1996).

The titling process requires a clear legal basis and a streamlined institutional infrastructure that is capable of administering the process efficiently. Numerous World

Bank projects have either underestimated the complexity of the technical issues involved in titling or assumed that titling could be initiated even if agreement over complex policy issues had not been reached. Many countries have a plethora of institutions, programs, and projects—often with overlapping competencies and responsibilities, contradictory approaches, and high resource requirements—that make it impossible to administer a titling program effectively or to instill confidence in the validity of the titles issued.

The absence of clear property rights increases the costs of land transactions and may drive them into the informal sector, but empirical evidence on the magnitude of this effect is limited, and government regulation of rental and sales markets appears to have been quantitatively more important. For example, in many Eastern European countries, land rental and even sales transactions emerged long before individuals were able to obtain formal land title. By contrast, the threat of expropriation of rented lands in Colombia and Mexico appears to have deterred land rental transactions even with a formal title. Evidence from Mexico suggests that formal individual title is not always necessary to facilitate operation of rental markets. The codification of property rights through proper procedures significantly reduced the transaction costs and increased the amount of land rentals in the market (Olinto, Davis, and Deininger 1999).

Examples

In the aftermath of the 1915 revolution in Mexico, about half of the national land area was granted to communities (*ejidos)* under communal title. Well-intended restrictions to prevent *ejido* land from falling into the hands of the wealthy proved to be highly inefficient. Although farmers invented ingenious ways to circumvent these restrictions (Heath 1992), commercial credit was difficult to obtain, and the transaction costs imposed by the various restrictions were high, involving, among other things, the threat of loss of land. In areas where nonagricultural opportunities had increased and farmers engaged in seasonal migration, communal tenure became increasingly dysfunctional.

This issue was addressed in 1992 by legislation that lifted the restrictions on transfers of land, subject only to an upper limit, and allowed *ejidos* to decide on the admission of members and the tenure regime under which they would operate. They can opt for communal tenure, contribute part of the common lands to a corporation or to a joint venture with outsiders, parcel all or part of the land out to members under freehold title, or even convert the whole *ejido* from communal to freehold tenure. Contrary to some fears, the law has not led to a widespread sell-off and pauperization of the majority of *ejido* members. Instead, allowing communities for which existing regulations had increasingly become a constraint the option to shift to a different tenure regime increased the owners' flexibility without giving up the core principles (and the advantages, such as the insurance function provided by joint land ownership) associated with communal types of tenure (de Janvry, Gordillo, and Sadoulet 1997).

The second example involves a reorientation of Bolivia's legal framework and overall institutional environment. Bolivia had a long history of arbitrary allocation of frontier lands to influential individuals. Corruption within the responsible agencies resulted in double titling and conflicting rights, which created considerable tenure insecurity. Titling was highly arbitrary; the process could take more than 12 years. The need to develop a broad consensus on the development of a more conducive land policy framework was time consuming, however, and required political support at the highest level, including presidential intervention (Munoz and Lavadenz 1997). Two areas of the resulting legislation are of particular interest.

Recognizing the possibility of multiple claims on land, the law established three classes of property rights: private homesteads, communal lands, and land under private freehold title. Homesteads are family residences up to half a hectare in size; so long as there are no conflicting claims, families can receive title to their homesteads merely by showing proof of possession and occupancy in a relatively simple and quick process. Title to communal lands (those that have been continuously used by a community or indigenous group) will be awarded if the community acquires legal status and specifies the by-laws under which it intends to govern internal matters.[5] Private agricultural properties under freehold can be established on the remainder of the lands. In addition, public lands can be allocated free of cost to indigenous communities and landless peasants or, if there is no demand from these groups, sold at market prices through a competitive auction. The legislation declares all land titles that have been acquired illegally to be null and void.

Conflicting claims are adjudicated, land rights are regularized, and a legal cadastre is established by a newly founded institution. Areas to be reformed first are selected on the basis of existing land conflicts and demand for regularization. A desk investigation based on existing registry information and aerial photography is followed by a field investigation that involves all the claimants. The results of this investigation are then cross-checked with the land records and published in the communities to elicit public comments. Once complaints and objections have been attended to, the results are posted publicly for two months. If no further complaints are lodged, the rights are finally registered. Experience thus far suggests that all but a tiny minority of claims can actually be regularized using this process and that large landowners are happy to cede illegally acquired parts of their "property" in exchange for legally recognized title to the rest.

Improving the Functioning of Land Markets

Governments in many developing countries maintain regulations that restrict land use and transfers. In many cases these restrictions have been adopted to avoid an unequal concentration of landholdings under a distorted policy regime or to reduce

the political and fiscal cost of implementing land reform. A review of these policies finds that they have rarely achieved their goals. We examine three main issues: restrictions on land ownership and use; restrictions on land sales and rentals; and interventions to improve the functioning of land markets.

Land Ownership and Use

Ceilings on land ownership have been imposed primarily to facilitate the breakup of large farms and the associated sales of land to small producers. Even where such measures have had a strong economic and social justification and where conditions for implementing them should have been favorable, ownership ceilings have had only a marginal impact. In India, for example, 35 years of ceiling laws have, in all except three states, transferred less than 1 percent of the agricultural area to the target group (Appu 1996). Ceiling laws have been expensive to enforce, have imposed costs on landowners who took measures to avoid them, and have generated corruption, tenure insecurity, and red tape.

Such ceilings might be justified as a temporary measure in situations such as Eastern Europe if there are large imperfections in markets for credit, inputs, and outputs and if (new) landowners are ill informed about the productive value of their endowment. In such a situation, measures to reduce the scope for rapid land accumulation by individuals with better market access or information might be justifiable—although a temporary sales moratorium may be a better way to achieve this than ownership ceilings.

Governments may also adopt zoning laws that classify certain land as either agricultural or nonagricultural. In rural areas, zoning land for agricultural use provides tax credits, exemption from assessments for urban services, and protection from nuisance suits and forecloses the option of selling the land as residential property. Zoning is justified if negative externalities need to be reduced by more than the cost of zoning enforcement (Brandão and Feder 1995), but the cost of enforcing zoning regulations that run counter to economic incentives should not be underestimated. Especially if the institutional infrastructure for enforcement is weak, zoning may lead to rent-seeking and corruption that reduce the economic benefits to a point where they become negative.

Restrictions on Land Rentals and Sales

Sales restrictions have frequently been imposed on beneficiaries of land reform or on settlers on formerly state-owned land to prevent them from selling or mortgaging their land. These measures could be justified to prevent beneficiaries from taking undue advantage of a land reform program or as a temporary measure to prevent land sales based on a lack of information or in response to imperfections in product

and financial markets. Even temporary restrictions on land sales can be counterproductive, however, because they prevent landholders from accessing credit when it is most needed. Hayami and Otsuka (1993) describe a situation in which farmers were forced to resort to inefficient arrangements such as usufruct mortgaging and wage labor to gain access to credit. Precluding beneficiaries of land reform from renting or selling their land is likely to prevent adjustments that reflect the settlers' abilities and could, if combined with restrictions on rentals, cause large tracts of land to be underutilized. The goal of preventing small landowners from selling out in response to temporary shocks would be better served by ensuring that they have access to output and credit markets and technical assistance and by providing them with safety nets during disasters to avoid distress sales. A moratorium on land sales might be justifiable to discourage speculative purchases, but alternatives such as limiting the amount of land that can be allocated to one individual or requiring that the land be cultivated before title is granted should be considered instead.

Rental restrictions aimed at eliminating the efficiency losses that are assumed to be associated with share tenancy are not justified. They should be eliminated because rental markets are likely to acquire increased importance with economic development (in most industrial countries, between 40 and 70 percent of all cultivated agricultural areas is rented rather than owned). As noted above, the efficiency gains from rental restrictions are likely to be modest even in the most desirable case, and the danger of less favorable outcomes is high. The historical root of most rental restrictions in developing countries is in tenancy reforms that sought to improve the status and welfare of the tenant farmer by imposing rent ceilings, awarding permanent rights to tenanted land (subject to landowners' right to retention), and transferring land ownership to lands not claimed by landowners. The inability to implement these reforms swiftly has negatively affected the functioning of rental markets. In most Latin American countries that tried to give tenants secure tenure, landlords thwarted the reforms by undertaking large-scale evictions or shifting to ranching, highly mechanized cultivation, or the use of wage labor. In India, tenancy reforms meant to benefit the poor seem, in the aggregate, to have damaged them. Although the impact varies by state, tenant evictions associated with tenancy reforms have caused the rural poor to lose about 30 percent of the total cultivated area, and, by threatening landowners who lease with the loss of their land, the reforms have completely undermined land access through rental markets (Appu 1996). Even in countries such as Egypt and Uganda where tenancy reforms could be implemented, failure to separate clearly the rights of landowners from those of tenants has led to overlapping claims to the same piece of land, causing uncertainty and inhibiting investment. Landowners (who normally are precluded from raising rents) have no incentive to invest, while tenants' rights cannot normally be used as collateral for formal credit.

Replacing rental restrictions with a clear regulatory framework for land rental markets could do much to improve agricultural productivity and the welfare of potential tenants. Furthermore, in situations characterized by overlapping property rights resulting from incomplete implementation of tenancy reforms, mechanisms allowing the parties to come to a mutually agreeable solution—whereby one party buys out the other or each party receives full property rights to part of the land—could boost investment and productivity.

Land Market Interventions

Many governments now realize that the social benefits from better-functioning land rental markets far outweigh the advantages of most of the restrictions that have historically been imposed on the operation of such markets. The key question, therefore, is to identify the most important impediments to better development of land markets and to sequence their removal in a way that does not jeopardize the poor. Earlier discussions indicated that the key issues are to enhance investment by clarifying property rights and establishing an institutional framework that guarantees the security of these rights; to increase efficiency by facilitating increased transferability of land (use) rights in rental and possibly sales markets; and to improve the integration of land and other (financial) markets. In addition, governments can consider imposing a land tax and establishing land information systems.

A land tax that is enforced at the municipal level not only could provide an incentive to large landowners to utilize their land more productively but could also make an important contribution to decentralization. On the one hand, a land tax is one of the few cases of a lump sum tax where—using asset, rather than production, values—the effective tax rate decreases as the income generated from the land increases, thus encouraging more productive use of the resource. Several countries are currently experimenting with a land tax, either using a flat tax rate as in Nicaragua, or basing land taxes on self-assessed land values as in Chile (Bird 1974). Land taxes have proven very useful in a wide range of urban contexts in developing countries and—if accompanied by appropriate institutions to help with accounting and implementation—should be feasible in rural ones as well. Because the value of land tax revenues in any given municipality is linked to land values, however, potential land tax revenues will obviously be meager in poor and remote rural municipalities. Land taxes therefore cannot redistribute wealth from rich to poor neighborhoods, which means that local governments will need additional sources of revenue if the interests of horizontal equity are to be served.

Several countries are also attempting to establish market information systems that would reduce transaction costs and improve the availability of information about land prices and markets. These systems would help expand participation in

sales and rental markets and thereby improve the acceptance of land as collateral by financial institutions. Such information systems would also help in developing, fine-tuning, and evaluating the broader framework for land policy, particularly in determining the degree to which distortions continue to apply, who exactly participates in these markets, and whether the interaction between land and credit markets is efficient.

Redistributive Land Reform

Many of the impediments to a smooth functioning of land, labor, and product markets date from the colonial era; because such longstanding barriers maintain a highly unequal distribution of land, large tracts of productive land lie idle, while peasants have to eke out a living on marginal and often environmentally fragile lands. In addition to reducing productivity, unequal land ownership is also linked to social unrest and violence. But the practical difficulties of implementing a land reform program and the ease with which the economic imperatives might be subordinated to political pressure are daunting obstacles.

In the past, instead of aiming to increase productivity and reduce poverty, land reform often aimed at calming social unrest and allaying political pressures by peasant organizations (Horowitz 1993). Even where there was a genuine commitment to breaking the power of landed elites, agrarian reforms were generally designed by urban intellectuals with little idea of the realities of agricultural production and a suspicion that small-scale cultivators could not farm on their own—let alone increase productivity (Barraclough 1970). Moreover, the individuals who were targeted to benefit from these programs were often politically powerful and well-connected rather than those who could make productive use of the land or who were the most deserving on poverty grounds.[6]

Furthermore, the continued existence of implicit and explicit distortions (for example, the use of land as a tax shelter) raised the costs of land reform by driving land prices above the capitalized value of the agricultural profits the land would produce. Such distortions also reduced the sustainability of land reform and, by encouraging beneficiaries to sell out to large farmers, contributed to a reconcentration of holdings. As noted earlier, attempts to impose legal restrictions often made matters worse. A recent census of Brazilian land reform settlements reported that only about 60 percent of land reform beneficiaries were actually tilling their land.

Finally, rather than improving the way land markets function and using these markets to complement government efforts to redistribute agricultural land, previous programs often aimed to provide substitutes for these markets, resulting in complex regulations that stretched available administrative capacity (Lipton 1974). Centralized government bureaucracies—charged with providing technical assistance and

other support services to beneficiaries—proved to be corrupt, expensive, and ineffective in responding to beneficiary demands.

Land Banks

In view of these difficulties, land banks and frontier settlements were seen as alternative mechanisms to land reform. Land banks provide loan financing at commercial rates for small farmers to acquire land, while frontier settlement, or colonization, aims to transfer individuals from congested areas to remote areas where lack of infrastructure means that land is cheap. With hindsight, it can be said that these alternative mechanisms were ineffective. Expecting beneficiaries to repay the full price of land has resulted in widespread default and nonrecoverable loans. Frontier settlement is no longer seen as a way to equalize land distribution. In addition to high administrative costs and associated environmental hazards, it has reinforced, rather than eliminated, unequal land ownership patterns in many countries (Thiesenhusen 1991). Thus most land reforms have relied on expropriation and have been more successful in creating bureaucratic behemoths and in colonizing frontiers than in redistributing land from large to small farmers, although redistributive land reform was shown to have positive social returns.

New Opportunities for Viable Reform

The fall in land prices associated with macroeconomic reforms, along with the loss of the privileges that had been conferred on large farms by discriminatory laws, trade protection, and credit subsidies, provides an opportunity to address land reform that is less detrimental to the functioning of markets. Several countries (Brazil, Colombia, Guatemala, the Philippines, and South Africa) are experimenting with a new "community-based" model of land reform. In this instance, the government's role is limited to providing groups of poor people with technical and financial assistance to buy land in a way that is similar to demand-driven social investment funds. This approach has a number of advantages. First, because there is an upper limit on the amount of the grant, beneficiaries have an incentive to seek run-down, unproductive farms. This approach also aims to replace the confrontational atmosphere that has characterized land reforms with a more collaborative attitude. In fact, because anything that improves the buyer's productivity is likely to increase the land price, the seller will, in a competitive market, have a strong incentive to help buyers improve the quality of their product—for example, through technical advice and marketing assistance. Second, in a clear departure from the traditional approach, the new model would stimulate, rather than undermine, land markets. Finally, by drawing on the private sector, nongovernmental organizations, and the community to develop, finance, and administer projects, the approach promises to overcome some of the

informational imperfections that have plagued the implementation of land reform by government bureaucracies. This also would help to develop a menu of project options more attuned to the specific needs of different groups within the target population (such as female-headed households).

These programs are too new for their impact on productivity and on the poor to be assessed. But initial evaluations underscore both the potential and the importance of the incentive framework and close monitoring. In South Africa the lack of local government structures, the continued existence of the land subdivision act (which was repealed only recently), and a very centralized and bureaucratic process initially posed limits to private sector participation, the outreach of the program, and the economic viability of the projects. Based on this experience, efforts are under way to reduce the administrative requirements for "livelihood projects" that involve very limited amounts of subsidy, to strengthen incentives for beneficiaries' own contributions, and to decentralize implementation of the entire land reform program. The success of several "share-equity schemes," where beneficiaries form joint ventures with private investors (including former farm owners), together with evidence from land transactions in the market outside of the program (Graham and Lyne 1999), point toward considerable commercial potential for land reform.

In Colombia evaluations show that the results of a community-based pilot program are clearly superior to those of previous programs and that formerly landless cultivators are able to establish highly productive agricultural operations (Forero 1999). The large size of the grant (70 percent of the land value), however, together with the legal requirement that it be used only to purchase land and not for complementary investments, reduces the economic and fiscal viability of the program. In addition to establishing small areas of perennials and vegetables, where productivity actually exceeds expectations, beneficiaries have purchased large tracts of relatively unproductive (pasture) land that often generates less revenue than is necessary to service interest on the debt (30 percent of the land value) incurred to purchase the land. Changing the program structure to avoid this problem and allowing each beneficiary family to purchase and invest in an area sufficiently large to fully occupy the family's labor (about 2 hectares) could greatly increase the economic return as well as reduce the fiscal cost.

In Brazil, where individual states sought to increase the pace of land reform, a pilot program to allow market-based acquisition of land by beneficiaries has had impressive results, accomplishing the land reform faster than expected. The new approach is now being implemented nationwide. Because of its decentralized nature, there is ample scope for innovative ways to ensure that the program is targeted to the poor, that it is economically viable, and that it provides incentives for repayment of the land credit, all issues that are of critical importance if the program is to be replicated on a broad scale (Buainain, Da Silveira, and Teófilo 1998; Navarro 1998).

Conclusion

Within the last two decades, considerable advances have been made in understanding the principles underlying land relations and in the way in which they might be affected by specific policy interventions aimed at growth and poverty reduction. At the same time, the number of countries where policymakers believe that the issues surrounding land relations must be addressed has expanded.

It is now recognized that formal title, under conditions of low population density, is not necessarily the most cost-effective and desirable way to ensure secure tenure and facilitate land transfers. One alternative is to award property rights to communities, which then decide on the most suitable tenure arrangements. This system not only should reduce transaction costs but also should allow a more flexible evolution of the structure of property rights while at the same time restoring some of the traditional social functions of land through secondary common property uses. Evaluations of such approaches, which are in increasing demand all over Africa, would be highly desirable. Another option is to award long-term and transferable leases, which could increase investment and expand the scope for using the rental market to transfer land to more productive uses.

Experience shows that the undesirable outcomes that have been attributed to the free operation of land markets were caused more by policy distortions and imperfections in other markets than by the operation of land markets per se. The fact that land sales are more affected than rentals by such factors suggests that the liberalization of rental markets should be a high priority. Indeed, the plethora of land market interventions has greatly reduced opportunities for the poor to rent land. A number of countries inherited a dualistic landownership distribution that is not conducive either to efficiency and investment or to equity and that has often been at the root of violence and protracted social struggle. After macroeconomic liberalization, some of these countries have started to implement a new model of community-based, market-driven land reform. Additional research is needed to determine whether such programs have affected land access, investment, productivity, and social indicators such as violence. The results of that research not only will allow policymakers to make changes as individual programs evolve but also will provide lessons for countries that are struggling to make land policies more effective.

Notes

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1. The breakdown in collective forms of production occurs because members do not receive the full benefits of increased effort (the free-rider problem), because members' ability to benefit from the collective's assets ends with termination of membership, thus diminishing members' investment incentives, and because there is an incentive to reduce the number of members, often coupled with government subsidies to embark on a capital-intensive development path—implying that collectives generate much less employment than do small (or even large) farms.

2. Farm management and supervisory skills are of importance not only because farmers with better management skills would operate larger farm units but also because they will generally want remuneration for their management comparable to what they could obtain in other sectors of the economy. This leads farm operators to substitute capital for labor as nonagricultural wage rates increase (Kislev and Peterson 1982). Such an increase in farm size over time does not necessarily indicate the presence of increasing returns to scale.

3. A positive relationship between asset distribution and growth is ascertained, for example, by Birdsall and Londoño (1997); Deininger and Olinto (1999); Deininger and Squire (1998); Fajnzylber, Lederman, and Loayza (1998); and Rodrik (1998). Besley and Burgess (1998) extend this to land reform legislation.

4. Indeed, some studies have found that in cases where no formal credit markets existed, title had little impact on farm income or investment (Carter and Wiebe 1990; Migot-Adholla and others 1991).

5. As in the case of Mexico, communities can decide to subdivide the communal lands and distribute parcels to individual members under freehold title if they so wish, subject to an upper size limit on the holding of any individual in the group and adherence to proper processes in doing so.

6. This is in line with evidence from a number of Eastern European countries, where political constraints generally led to a relatively "inefficient" way of implementing land reform—through physical restitution of plots rather than compensation of former owners through fungible cash payments.

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