

Land Transactions

MAKING LAND RIGHTS MORE SECURE IS A precondition for land-related investment; however, unless rights are transferable, both the magnitude and incidence of such benefits may be limited. Land transactions can play an important role by (a) providing land access to those who are productive, but who own no or little land; (b) allowing the exchange of land as the off-farm economy develops; and (c) facilitating the use of land as collateral to access credit markets where the conditions for doing so exist. The ability to transfer land also increases the incentive to undertake land-related investments.

Traditionally, much of the discussion on land markets has focused on the permanent transfer of ownership through sales. However, similar benefits can accrue from often informal transactions in land rental markets that are widespread across the world and that are less likely to be affected by, or can adjust more easily to, the market imperfections that are pervasive in rural areas of developing countries. To address these issues this chapter first discusses key factors affecting the operation of rural land markets and their potentially differential impact on land rental and land sales, then reviews empirical evidence from different regions of the world and uses this to draw some policy conclusions.

The opportunity for rights transfers will be important in many settings, both rural and urban, but the functioning of other markets, in particular, those for labor and credit, will affect the ultimate impact of land markets. As the possibility for adjusting to imperfections in these markets varies depending on whether land transfers are temporary or permanent, this chapter discusses the interaction between land with other factor markets separately for land rental and land sales markets.

For rental markets it describes the contractual options and their efficiency and equity implications, as well as evidence on the extent and impact of the operation of formal and informal rental markets in the world's main regions. Given the vast differences in the nature and level of activity in rental markets across regions, we identify the link between policy interventions and the performance of rental markets and draw conclusions for policy and research. Overall we conclude that policy-makers have underestimated the potential for efficiency-enhancing transfers of land through such markets and propose a number of avenues to improve their functioning.

If sales markets are sufficiently developed so that land can be used as collateral for credit to finance investment, in addition to improving the efficiency of land allocation, low-cost mechanisms to effect land sales can also contribute to the emergence of a financial infrastructure and associated broader benefits. However, distortions in other markets or expectations about future land price increases may drive the price of land beyond its productive value, thereby making land acquisition through the sales market difficult for the poor. In addition, the transaction costs of enforcing collateral may be high, depending, among other things, on the efficiency of the land administration infrastructure. If this is the case, poor buyers, who would gain the greatest benefit from better access to land, may be disadvantaged in obtaining such access through land sales and purchase markets and, in particular, will normally not be able to rely on mortgage financing for such purchases. This illustrates that, more than for rental, the outcomes of land sales markets will depend on the extent to which other markets function, especially those for products and credit. We discuss the critical factors involved, the extent to which policy measures have been able to address them, and a number of policy implications.

Key Factors Affecting the Functioning of Rural Land Markets

IN A WORLD OF PERFECT INFORMATION, COMPLETE MARKETS AND zero transaction costs, the distribution of land ownership will affect households' welfare, but will not matter for efficiency outcomes, and everybody will operate their optimum farm size (Feder 1985). The following paragraphs illustrate how imperfections in labor and credit markets affect the performance of both land rental and land sales markets.

Labor Market Imperfections

One main reason for imperfections in rural labor markets is the cost of supervision, which arises because except in extremely limited circumstances, wage workers' true effort is not easily observable. Such imperfections imply that wage workers will have limited incentives to exert effort, and either need to be supervised at a cost or be offered contracts that provide higher incentives, such as piece rate contracts (Jensen and Meckling 1976). This issue, which has received considerable attention in the literature on industrial organization, has profound implications for the organization of production and the optimal size of the farm in numerous settings (Calvo and Wellisz 1978; Eswaran and Kotwal 1985a,b).

In agricultural production, spatial dispersion of the production process and the vagaries of nature imply a need to constantly adjust to micro-variations of the natural environment. Family members have higher incentives to provide effort than hired labor.¹ They share in output risk, and can be employed without incurring hiring or search costs. Even though owner-operated family farms may hire or exchange labor for seasonal tasks, they avoid the need to supervise permanent wage workers, implying that they enjoy a productivity advantage compared with large farms with numerous hired laborers. These attributes underlie the general superiority of family farming over large-scale wage operations.

Imperfect rural labor markets imply that land-scarce households that have to sell their labor in the market will face some transaction costs, which will imply underemployment and a marginal value of labor time below the market wage. Land-abundant households that, in a world without transaction costs and imperfect supervision capacity, would contract labor to cultivate their land, will have a marginal cost of labor well above the market wage. In this case the complete absence of land markets would force households to cultivate the land they happen to own, implying that land-abundant households would need to cultivate their land with expensive labor and land-scarce households would be trapped by underemployment in low-return, own-farm activity. The latter would be particularly disadvantageous if opportunities existed for off-farm labor market participation that would require farmers to forgo the income from renting out their land. Assuming that other factors such as ability, access to capital, and technology were equal between the two types of households, the

Supervision constraints for hired labor are particularly pronounced in agriculture and often lead to the productive superiority of owner-operated farms

ability to obtain additional land would improve the livelihood of land-scarce, labor-abundant households by allowing them to employ their underutilized labor more effectively and increasing their shadow wage.² Indeed, such inefficiency, especially in the employment of labor, is of considerable relevance for China, where the functioning of land markets is significantly restricted.

Capital Market Imperfections

Collateral requirements can help overcome moral hazard in credit markets

The positive impact of rental market activation on land access by the poor is diminished if access to capital depends on initial wealth, because of the need for up-front working capital to acquire inputs in addition to land and labor. Such quantity rationing in credit markets arises from the presence of asymmetric information and moral hazard (Stiglitz and Weiss 1981). In informal credit markets, credit providers use close familiarity and social control to select promising clients or projects. This implies, however, that the scope for diversifying risks across space and different types of clients is limited and means that lending entails high levels of risk, resulting in high interest rates and relatively short-term credits. Formal credit markets can overcome problems of asymmetric information by using collateral, often in the form of land. However, the costs of and political impediments to foreclosing on smallholders' land are often quite significant, implying that the transaction costs associated with providing credit to small producers may be so high as to exclude small farmers.

Thus credit market imperfections can offset the supervision cost advantage family farmers enjoy. Consequently, in the presence of credit market imperfections the supply of working capital depends on the amount of land owned. The optimal size of the operational holding varies systematically with the size of the owned holding, even if land rental markets operate perfectly. While the magnitude and direction of this effect depend on the elasticity of output with respect to effective labor and of labor effort with respect to supervision, it can overwhelm the productivity advantage of family farmers and give rise to a positive relationship between owned farm size and productivity. Working capital constraints could therefore have significant impacts on land sales, and even on rental markets. Interventions in credit markets to overcome these shortcomings are difficult and often have not had the desired effect (Brummer and Loy 2000; Kochar 1997).

Few Economies of Scale in Agricultural Production

Discussion on the “optimum” farm size for different products and locations has been considerable. Given the countervailing factors of capital and labor market imperfections, the optimum farm size is very much an empirical question. Technical economies of scale could arise from the presence of indivisible factors of production or fixed setup costs leading to an initial range of farm sizes where the average cost of production declines with farm size. In cases where other markets function reasonably well, optimal farm sizes often do not exceed the scale at which family labor is fully occupied (using seasonal hired labor for specific tasks). A large literature has demonstrated that many agricultural activities do not exhibit true economies of scale in production. Exceptions include cases of highly specialized machinery, livestock production, or plantation crops where economies of scale are transmitted from the marketing to the production stage.³ Economies of scale associated with the processing and marketing of many agricultural products do not necessarily have important implications for the unit cost of farming operations as long as competitive markets for outputs and inputs exist. Access to such markets is sometimes arranged through cooperatives or contract growing arrangements, while production may still be most effectively organized using smaller producers (Adesina and Djato 1996; Townsend, Kirsten, and Vink 1998). Therefore one would expect to find constant or decreasing returns to scale in most empirical studies of agricultural production.

A number of studies find a negative relationship between farm size and productivity for all but the smallest farm size classes (Berry and Cline 1979; Burgess 2001; Carter 1984; Kutcher and Scandizzo 1981; Newell, Pandya, and Symons 1997; Udry 1997), and others are unable to reject the hypothesis of constant returns to scale in agricultural production (Burgess 1997; Dong and Putterman 2000; Feder and others 1992; Lanjouw 1999; Olinto 1995; Wan and Cheng 2001). Some of the observed inverse relationship can be explained by differences in land quality, as large farmers tend to cultivate less fertile land and grow crops of lower output value (Benjamin 1995; Bhalla and Roy 1988; Verma and Bromley 1987). Yet even after controlling for land quality and other differences associated with farm size, empirical studies still indicate a significant inverse correlation.

The relationship between farm size and productivity will tend to be positive in situations where credit access is more important than the ability to overcome labor market imperfections. A study of Sudan, for example, shows that yields for virtually all crops are lower for smaller farmers

Empirical studies confirm the absence of economies of scale in agricultural production

Differential credit market access can generate a relationship between farm size and productivity

and are higher for larger farmers because of the latter's ability to access capital and other inputs. In this situation the land rental market leads to land transfers from poor and labor-abundant smallholders to rich and relatively labor-scarce households (Kevane 1996). The reason is that capital market imperfections combined with reasonably functioning land and labor markets and a technology that is not too supervision intensive can make renting out land and working for a wage more attractive for small, credit-constrained households than engaging in owner cultivation without cash inputs. The inverse relationship between farm size and productivity is much weaker in Southeast Asia (David and Cordova 1994). Acute capital constraints lead to the emergence of a positive relationship between farm size and productivity in Malawi, where both land and labor are extremely scarce (Dorward 1999). Data that allow direct comparison of the efficiency of family farms with that of partnerships and large-scale collective and state farms suggest that collectives and state farms displayed lower technical efficiency than family farms and partnerships, although this difference declined over time (Brooks and Koester 1997). Family farms are not as efficient as partnerships and large-scale farms, and partnerships are superior to all other organizational forms (Mathijs and Swinnen 2001).

The foregoing discussion leads to two main conclusions. First, in settings where the production process is not capital intensive and where access to credit and capital is broadly similar across farm sizes, labor market imperfections result in the productive superiority of family farms. Second, imperfections in input, product, credit, and insurance markets will affect the functioning of land rental and sales markets, and will lead outcomes to deviate from what one would expect in a hypothetical situation of perfectly functioning markets. As a consequence, undesirable outcomes that may be observed in land rental or sales markets can be due to imperfections in other markets. Even well-intentioned regulatory interventions or administrative restrictions on land markets that do not address the underlying causes may end up worsening the situation rather than improving it. This chapter illustrates some of these issues with concrete examples from specific country and regional settings.

Implications for Land Rental Markets

ECONOMISTS GENERALLY CREDIT LAND RENTAL MARKETS WITH considerable potential to enhance productivity and equity by facilitating low-cost transfers of land to more productive produc-

ers and permitting participation in the nonfarm economy, thereby allowing consumption smoothing in response to shocks and accumulation of experience and capital. Because the structure of land rental contracts will affect productivity outcomes and theory suggests that in many situations wealth constraints by tenants may make the first-best contract (fixed rent) infeasible, a major policy concern has traditionally been to avoid the suboptimal outcomes that may arise in this context. In practice, however, any potential losses associated with share contracts have been found to be relatively small. Improving on share contracts through government intervention is difficult if not impossible, especially given the considerable flexibility for the contracting parties to adjust to imperfections in other markets. Thus while the equity outcomes achieved in land rental markets will still depend on the parties' outside options, and rental contracts are clearly less suitable as collateral for credit market transactions, the opportunities for land rental markets are quite high.

General Potential

The possibility of users exchanging land through formal or informal rental arrangements is important for a number of reasons, suggesting that in many circumstances rentals can have advantages over sales markets. For example, rental markets (a) allow flexibility in adjusting the land area used with low transaction costs; (b) require only a limited capital outlay, thereby leaving some liquidity available for productive investments rather than locking it all up in land; (c) facilitate easy reallocation of land toward more efficient users than the current owners, especially if the current owners are old, are noncultivating heirs, are urban beneficiaries of restitutions, and so on; (d) provide a stepping stone toward land ownership by the landless; and (e) help overcome, through sharecropping contracts, market failures in labor, insurance, credit, management, and supervision, thereby potentially helping secure the competitiveness of participants (de Janvry and others 2001). Indeed, rental markets operate in a variety of forms, ranging from highly informal transactions to formalized, long-term contracts.

If there are labor market imperfections or unobserved differences in ability across producers, well-functioning land rental markets can help transfer land to its best use at comparatively low transaction costs. This can improve production efficiency, and also will often enhance the distribution of income and reduce the vulnerability of poor households by

Land rental markets can enhance productivity and equity by transferring land to more productive users at low cost

Land rental markets facilitate less skilled producers' participation in the nonfarm economy

Land rentals help to smooth consumption in response to shocks and facilitate accumulation of experience and capital

offering a more stable source of livelihood than they would have by selling their labor in frequently volatile and imperfect local labor markets. Indeed, studies, some of which are discussed in greater detail later, support the notion that land rental markets transfer land to more productive producers, thereby increasing overall output in the economy. Land rental markets serve an important function in equalizing returns to nontradable factors of production, such as family labor and bullocks in India (Skoufias 1991). If the distribution of the surplus between landlord and tenant is not too skewed, rental will have a positive impact on equity.

As opportunities in the nonfarm economy increase, land markets allow households to engage in migration, specialization, investment, and intergenerational land transfer, thereby improving productivity and participants' earnings. Households with low agricultural skills are likely to be able to obtain higher incomes from off-farm employment than from farming, and thus will be better off if they rent out some or all of their land for others to cultivate. In a growing economy land rental market activity will therefore increase over time, and if households' agricultural abilities differ, will unambiguously increase incomes for everybody (Carter, Yao, and Deininger 2002). Policy measures to facilitate the operation of such markets at low cost to effect this adjustment would therefore be justified. Where restrictions on the functioning of land markets are severe, they can become an obstacle to economic diversification. Indeed, results from Ethiopia indicate that producers who are afraid of being affected by redistribution in the future are significantly less likely to engage in off-farm work, suggesting that the way in which land markets are regulated will affect the broader rural economy and the emergence of off-farm employment (Deininger, Jin, Adenew, Gebre-Selassie, and Demeke 2003).

Rental markets also provide households that have suffered unfavorable shocks another ex post option of coping with the consequences of such an event. The importance of this aspect is illustrated in the context of the HIV/AIDS crisis in Africa, which has led to households making extensive use of land rental markets both before and after the death of a household member to adjust their operational landholdings to the available family labor force, and thus increase their income over what they could have earned by their own cultivation (Drimie 2002).

Observers have long pointed to the possible existence of an agricultural ladder, whereby landless households lacking capital can start as renters or share tenants, build up knowledge and savings, and eventually become small owners. Evidence suggests that tenancy played an

important role in the U.S. South after the abolition of slavery (Reid 1977). Similar movements are observed in Honduras (Boucher, Barham, and Useche 2001) and, to a more limited extent, in Nicaragua (Carter and Chamorro 2002). The difference between these countries can partly be attributed to variation in tenure security, reinforcing the notion that land transactions, and the scope they imply for households to move up the agricultural ladder and accumulate capital, are impossible without secure tenure arrangements in place. Indeed, a combination of tenure insecurity, policy distortions, and restrictions on specific rental transactions may well account for the limited evidence on mobility via the rental market in developing countries. At the same time, observers have noted that for varying reasons, land rentals often do not involve the largest landlords, and that the absence of long-term rental contracts can seriously reduce the scope for tenants to make the first step on the agricultural ladder toward eventual land ownership. This implies that policies governing the emergence and functioning of land markets will be of great importance.

Contract Choice

One issue that makes land rental of interest to policymakers is that the choice of contract will affect both efficiency and equity of the outcomes achieved through such arrangements. At the same time, the nature of rental market contracts is affected by the way in which markets for labor and capital function, the distribution of endowments, and the interventions by the government that may eliminate some contractual options or reduce or increase the transaction costs associated with them. To explain the variety of observed rental transactions this section explores the theoretical underpinnings of market development and specific forms of market transactions in land rental or sales markets and their impacts on efficiency and equity. A review of the empirical evidence on the extent to which markets function in different settings and how the differences can be explained follows. With this background one can explain why, even for countries that are similar in many respects, the extent of land market activity and the form that transactions take vary considerably as a result of policy.

Landowners who are unable or unwilling to personally cultivate their land can either employ wage laborers, with or without supervision, or rent out their land under a share contract or a fixed rent contract. Economists

The contractual options range from wage labor to sharecropping to fixed rent

have long pointed out that the size of two parameters, namely, the fixed payment and the share of the harvest to be received by either landlord or tenant, generate, at any given point in time, a continuum of contractual options that extends from pure wage labor over sharecropping to a fixed rent contract. Any rental or wage labor contract can be viewed as consisting of a fixed payment between the two parties, which can be zero, together with a sharing rule that defines how output will be divided between tenant and landowner. By affecting the incentives of the parties, the surplus to be kept by them, and the risk each of them has to bear, these two parameters will affect the efficiency and the equity outcome associated with any contract in predictable ways. They do so through their impact on the incentives for effort supply as well as on the risk that each of the contracting parties has to bear. The final impact of these on production, and thus the chosen contract, will depend on the technology and the importance of long-term investment for soil fertility and other productivity-enhancing measures.

The landlord maximizes income by choosing the number of tenants, the fixed payment, and the output share subject to the constraint that tenants achieve their (exogenously given) level of welfare in the next best option without the land. Based on this, the tenant's effort-reaction function determines the level of effort that will maximize utility in view of the constraints. Because self-employed labor has higher productivity than hired labor, for large landowners to rent out land under fixed rent contracts is more profitable than working it using hired labor in the absence of other market imperfections. If effort is unobservable, credit is rationed or insurance markets are imperfect, and tenants are risk averse, the fixed-rate tenancy contract may not be attainable or desirable and a second-best share contract would be adopted instead. Under a wage contract, workers will not bear any risk; but because they do not share in the output, they will also have minimal incentives to apply nonobservable effort. At the other end of the spectrum, a fixed rent contract will provide optimum incentives for effort supply to the tenant, but because the tenant has to pay the rent even in case of a total loss of harvest, for instance, because of flooding or drought, it may be too risky for the tenant to undertake.

How land rental will affect the welfare of participating households will depend on the size of the surplus achieved from engaging in rental and on its distribution between landowners and tenants. A number of studies demonstrate that the number and types of outside options available to tenants, such as wage labor, will affect the outcome of the bar-

The welfare impact of land rental depends on the outside options available to contracting parties

gaining between landlords and tenants as well as the efficiency of the production outcome obtained (Conning and Robinson 2002; Mookherjee 1997). This is supported by the fact that throughout history large landlords have relied on systematically reducing the availability of outside options to obtain labor at low wages. It also implies that restrictions on the operation of rental markets are unlikely to improve welfare outcomes unless they change the bargaining power of one of the contracting parties. Where this is not the case, by limiting the set of contractual options available, they may decrease overall welfare.

Effort Provision

Under conditions of certainty, and if effort is observable and enforceable, all contracts lead to equivalent outcomes and the choice of contract type does not matter (Cheung 1969). If the assumption of perfect effort enforceability is dropped, tenants receive only a fraction of their marginal product for all but the pure cash rental contract. Therefore with effort unobservable and under conditions of certainty (or risk neutrality), the fixed rent contract clearly dominates the fixed wage and the share contracts and will always be chosen in equilibrium. Given the supervision costs for workers or sharecroppers, any type of contract other than fixed rent would result in an undersupply of effort by the tenant or worker, which would lower total production. This would imply that the optimal course would be to offer fixed rent contracts (or a higher share of output) to tenants who have higher skills or for tasks and crops that are more skill intensive. In India, more experienced individuals receive tenancy or fixed term contracts and less experienced ones receive wage contracts (Chaudhuri and Maitra 2001). Other studies show that landlords are indeed aware of tenants' level of ability (Lanjouw 1999) and that they adjust the terms of contracts to provide higher incentives for more efficient operators and those with better capital endowments (DeSilva 2000).

If fixed rent contracts are not an option, the incentive for effort supply can still be increased by the contracting parties adopting long-term arrangements that are built on reputation effects. Sadoulet, Fukui, and de Janvry (1994) confirm that close social relationships can increase the incentive for tenants to provide effort. Their study compares the attributes of sharecropping contracts with kin and with nonkin and found that nonkin sharecroppers use significantly fewer inputs and obtain less output, but for close kin they found neither a disincentive effect nor a

Effort supply and intensity of input use will be highest under fixed rental contracts

Supervision or long-term relationships can partly increase effort supply

reduction in output. This suggests that embedding contractual arrangements in a long-term, personal relationship offers considerable potential to attenuate the disincentives and productivity losses that are otherwise associated with sharecropping contracts. If landlords are absentee or inexperienced in farming, they tend to choose fixed rent contracts (Jodha 1984; McCarthy, Sadoulet, and de Janvry 2001; Sharma and Dreze 1996). The time landlords spend on supervision has an opportunity cost, although recent empirical estimates suggest that this is more than compensated for by the percentage increase in tenants' effort (Ai, Arcand, and Ethier 1997; Arcand and Rambonilaza 1999).

Indivisible Endowments and Capital Market Access

Tenants' wealth and borrowing constraints limit the scope for fixed rental

With risk aversion and uncertainty, or with capital market imperfections that prevent the tenant from either borrowing to obtain working capital or to smooth consumption in case of an unfavorable shock, a share contract provides the possibility of partly insuring the tenant against fluctuations in output (Ray and Singh 2001; Shetty 1988). Under these conditions the optimal contract choice entails a trade-off between the risk properties of the fixed wage contract, where the landlord assumes all the risk and the tenant's risk is zero, and the incentive effects of the fixed rent contract, which would result in optimal effort supply by the tenant. A limit on the working capital available to the tenant (or to landlord and tenant) because of imperfections in the credit market can also lead to the adoption of a share contract as the optimal solution to the bargaining problem, where the share contract emerges as the optimum between the two extremes of too high or too low incentives (Basu 1992; Ghatak and Pandey 2000). The prevalence of share contracts in many regions around the world indicates that the circumstances under which they are a second-best solution are common.

This limited scope provides the rationale for sharecropping and interlinked contracts

Tenants may be able to meet only part of their working capital requirements in the credit market because of the limited suitability of unharvested crops as collateral and at higher interest rates than the landlord would get by offering the land as collateral. Landlords are often in a better position to provide tenants with credit and actuarially fair insurance than other financial intermediaries, because they possess information about the tenants. As the amount of credit provided will be related to tenants' expected future income, landlords can set the contractual fixed payment to zero and still be free to adjust the interest rate

or accept the customary interest rate and adjust the fixed payment and share terms to realize an optimal outcome (Otsuka, Chuma, and Hayami 1992). Thus the main reason that interlinked contracts and cost-sharing arrangements are so common may be because they implicitly provide the credit or insurance tenants need in an environment where credit and insurance markets are imperfect.⁴

In a study of Tunisian sharecroppers, Laffont and Matoussi (1995) provide insights on the relationship between liquid assets and contractual parameters. The results suggest that differences in the contracting parties' working capital endowments can account for the coexistence of a variety of contracts, even in the same environment and among parties with similar risk aversion characteristics.⁵ Indeed, data confirm the positive relationship between the crop share and the tenant's working capital endowment that would be predicted by theory, even with perfect monitoring of effort. Evidence shows that output increases significantly with tenants' wealth for all contract types, including share contracts, but that tenant wealth has no effect if only fixed rent contracts are considered. Similarly, the wealth of the landlord has, as expected, a negative effect on the tenant's share and a positive effect on production under the share contract, but none in other forms of contractual arrangements. Working capital, therefore, appears to be a significant explanation of the type of contract chosen and the production gains achieved on a given plot. Landlords' preference for tenants who already possess some land and draft animals, and such tenants' ability to obtain better contract terms, which is well documented in the literature (Quibria and Rashid 1986), point in the same direction. The importance of potential tenants' asset endowments is also emphasized by evidence from India, which indicates that because of wealth constraints, many potential tenants are left out of the tenancy market (Shaban 1991).

In this context, both the smallest and the largest landholders rent their land to farmers who are neither capital constrained nor suffering from the disadvantage associated with the need to supervise hired labor. This illustrates that the ability of the land rental market to bring about efficiency-enhancing transfers is constrained by potential tenants' endowment of assets and other means of production. Thus while land rental improves the allocation of resources in the presence of unequal factor endowments, potential gains are constrained by the wealth of potential participants. In addition, evidence indicates that fixed transaction costs preclude some poor households that desire only relatively minor adjustments of their operated land from entering the tenancy

Productivity losses associated with share tenancy are small

market. Similarly, data from India suggest the prevalence of imperfect adjustment whereby, on average, farmers realize only about 75 percent of the desired level of land transactions (Skoufias 1995).

The foregoing discussion suggests that share tenancy will be associated with some productivity loss compared with a fixed rent contract. While numerous studies have been conducted on this topic, many of them suffer from methodological flaws. Use of appropriate methodology suggests that for India, tenancy was, on average, associated with a loss of productivity of 16 percent once adjustments for differences in land quality were made (Shaban 1991). In addition, inputs of family labor and draft animals were significantly lower on sharecropped plots than on owned parcels. The study did not find any statistically significant differences in productivity between owned plots and plots rented on a fixed rent basis, confirming that fixed rent contracts do not have any negative impact on productivity. To interpret this finding, note that it was obtained in an environment characterized by government constraints on fixed rent contracts, implying that the figure of 16 percent in productivity losses is likely to constitute an upper bound. This is consistent with the results from an exhaustive survey of the empirical literature, which finds that no strong evidence supports the hypothesis that yields under share tenancy are lower than under owner farming or fixed-rent leasehold tenancy (Hayami and Otsuka 1993).

More recent case studies provide added support for the empirical generalization that share tenancy provides a second-best arrangement that, in any given environment, is difficult to improve on unless the operation of factor and credit markets improves (Lansink, Pietola, and Backman 2002; Otsuka 2002; Quisumbing 2001; Sadoulet, Fukui, and de Janvry 1994; Sharma and Dreze 1996). Even though they cannot completely eliminate structural impediments and bring about a fully efficient allocation of land in an economy, land rental markets, including share tenancy, can go a long way toward bringing the operational distribution of holdings closer to the optimum, given existing constraints (Galassi and Cohen 1994). Given that, as noted earlier, fixed-rent contracts may be either not feasible or not optimal for many potential market participants because of wealth constraints and limited ability to bear risk, concern about the potential undesirable implications of share tenancy was probably not warranted. Even where such arrangements may result in some reduction of productivity, short of redistributing assets, devising policies that would remedy this shortcoming at a reasonable cost is extremely difficult.

Contract Length

Even if a rental contract provides tenants with adequate incentives to maximize production in any given time period, incentives to invest or to maintain soil fertility may be insufficient. Dubois (2002) illustrates the relevance of this empirically for the case of the Philippines, confirming that even in designing short-term contracts, landlords make adjustments to account for the need to maintain land quality in the long term. In a multiperiod context where tenants and landlords can develop reputation, the likelihood of a more efficient contractual arrangement is increased. In this case, the threat of losing reputation will prevent tenants from shirking or landlords from cheating if they provide essential inputs to production, and so the fixed rent contract will tend to dominate the fixed wage contract as it does when no uncertainty is present in the production environment (Otsuka, Chuma, and Hayami 1993; Roy and Serfes 2000). This is confirmed by historical data from Sicily, which demonstrate that landlords employed long-term contracts for crops that had higher maintenance needs (Bandiera 2002). In the same vein, in situations where investment is important, tenancy may be less desirable than the sale of land, because a number of reasons could prevent landlords from reaping the full benefits of land-related investments. Such a dynamic inefficiency of rental contracts is indeed confirmed empirically, even though its magnitude may be quite small (Jacoby and Mansuri 2002). Obviously, a critical precondition for long-term contracts to be entered into is that the type and nature of property rights available to the contracting parties allows them to do so.

Where investment is important, long-term contracts will be needed

Implications for Land Sales Markets

LAND SALES MARKETS PROVIDE AN OPPORTUNITY TO OBTAIN land for permanent use, which is normally associated with higher investment incentives than short-term rental. In addition, making land marketable provides a basis for using it as collateral in credit markets. The ability to formally prove land ownership at low cost and, based on this, to transact more extensively in sales markets, can be conducive to the development of formal financial markets and producers' access to formal credit even if few actual transactions are observed. At the same time, imperfections in financial and other markets may imply that land sales markets will, in cases where credit market imperfections are severe or a

Land sales markets can provide the basis for financial market development

select subset of producers benefits from distortions in other markets, not necessarily transfer land to the most productive producers.

Compared with rental markets, where contracts can be adjusted to overcome the impact of capital market imperfections, land sales markets will be affected by credit market imperfections. Furthermore, any distortions that increase the returns to land, such as subsidies, will be capitalized in land prices. This has implications for the possibility of land acquisition by the poor. A number of factors could increase the price of land above the present value of profits from agriculture. For example, in situations where financial markets do not work well or where confidence in money as a repository of value is low, land may be an important store of wealth and may be acquired for speculative purposes. Where this is the case, for poor but efficient producers to gain access to land through the purchase market may be difficult. Also, in environments where credit markets do not work well, land sales markets are more likely to lead to undesirable outcomes, therefore market imperfections or distortions in other markets could give rise to the emergence of efficiency-reducing outcomes, such as speculative purchases, distress sales, and artificially inflated land values that reduce access to land by low-income and landless buyers.

Expectations, risk preferences, and the shadow price of capital affect land prices

If all markets were perfect, the sale price of land would equal the net present value of the stream of profits that could be derived from the land, and potential buyers would be indifferent between acquiring land through rent or through purchase. However, transaction costs that are higher than in rental markets (Lence 2001), risk and portfolio considerations, limited access to credit markets, and the immobility of land all imply that the actual performance of land sales markets may be far from the theoretical ideal. In this case, higher agricultural productivity would not necessarily be translated into higher demand for land, and under certain conditions land sales markets may lead to outcomes that are not productivity enhancing. Conceptually, in addition to the expected return from cultivation, which is the same as for rental markets, the shadow price of capital, the time horizon, the discount rate, and the expectations about the future returns from agriculture and from other uses of land will affect a producer's willingness to pay for land in the sales market.

In agricultural economies where risk is high and purchasers' savings are the main source of funds for land acquisition—that is, access to credit from outside is limited and land performs an important function as a store of wealth—prices for land can fluctuate significantly over time. The reason is that because returns from agricultural production are

highly covariate, demand, and therefore land prices, will be high in good crop years when savings are high, sellers are few, and potential buyers of land are many. At the same time, the need to satisfy basic subsistence constraints could give rise to a large supply of people who are forced to engage in distress sales of their land in bad years, often to individuals with incomes or assets from outside the local rural economy. Thus in areas with poorly developed insurance and capital markets land sales will likely be few and limited mainly to distress sales. Studies in Bangladesh and India confirm this hypothesis. Rosenzweig and Wolpin (1985) found that farmers in India who experienced two consecutive drought years were 150 percent more likely than other farmers to sell their land. Furthermore, individuals who had to sell off land during crises may not be able to repurchase land during subsequent periods of recovery (Bidinger and others 1991; Kranton and Swamy 1999).

During periods of macroeconomic instability nonagricultural investors may use land as an asset to hedge against inflation, and thus an inflation premium is incorporated into the real land price. If expected inflation is fully reflected in interest rates, inflation alone will not affect agricultural land prices (Feldstein 1980). The lack of other investment options can have the same effect. However, if expected inflation is not fully reflected in current or expected future interest rates, and if land is perceived to be no riskier than alternative assets, excess demand for land will increase the price of land as a speculative asset. Indeed, Falk, Lee, and Susmel (2001) and Just and Miranowski (1989) showed that inflation and changes in real returns on alternative uses of capital were the main factors in explaining changes in land prices for the United States. A simulation using the results of econometric estimation for Brazil for 1966–89 finds that 6 percent of the increase in land prices was attributable to credit subsidies and 28 percent to macroeconomic instability (inflation) (Brandão and de Rezende 1992).

With populations growing and urban demand for land increasing, people expect the price of land to appreciate, and some of this expected real appreciation is capitalized into the current land price. This is supported by Robison, Lins, and Venkataram (1985), who find that implicit rates of return to land under agriculture in predominantly agricultural states in the United States are much higher than in states where the demand for nonagricultural land is high. These returns are realized only when the property is sold, implying that in the latter the rate of return on an investment in land that is used only for agricultural production may be low.

**Macroeconomic instability
may lead to speculative
overvaluation of land**

Collateral value of land makes mortgage-based land acquisition difficult

Because land has collateral value, its equilibrium price at given credit costs will exceed the present discounted value of the agricultural income stream produced from the land in areas where only larger landowners have access to credit. Mortgaged land, however, cannot be used as collateral for working capital, so owners who purchase land on credit do not reap the production credit advantage, and therefore will be unable to repay the loan out of increased income from the land unless some equity is used to finance part of the transaction. Thus land sales are likely to be financed mostly out of household savings so that the purchased land can be used as collateral for credit to finance improvements and equipment. This need to purchase land out of savings tends to make the distribution of landholdings more unequal, despite the greater value of land to smaller owners arising from its insurance value and their lower labor costs. Thus both the limited availability of credit and the high cost of borrowing would prevent those who do not have accumulated savings from acquiring land. Combined with high transaction costs, these attributes also make rural land markets rather thin.⁶ Speculative land price bubbles that increase the price of land over and above the net present value of the flow of services that can be derived from it are often fueled by excessive credit (Foldvary 1998). Tax preferences for larger farms or subsidies to crops typically grown by them will also drive the price of land higher than the expected agricultural profits would justify (Gunjal, Williams, and Romain 1996).

Where any of these factors drives land prices above the capitalized value of the income streams associated with such land, the poor have difficulty buying land. Even if they are provided with credit on market terms, that difficulty persists unless their productivity advantage from lower labor costs is extremely large. Because some of the imperfections and distortions are difficult to eliminate directly, for example, limited credit access by tenant farmers, reducing poverty may require giving grants to poor producers to overcome this disadvantage, especially in situations characterized by long-standing discrimination against specific groups in the population.

Credit market imperfections may lead to distress sales

Historically, distress sales have played a major role in the accumulation of land by large manorial estates in China (Shih 1992) and in early Japan (Takekoshi 1967) and by large landlord estates in Punjab (Hamid 1983). The abolition of communal tenure and the associated loss of mechanisms for diversifying risk are among the factors underlying the emergence of large estates in Central America (Brockett 1984). Cain (1981), who compares land transactions in Bangladeshi and

Indian villages with different access to risk-coping mechanisms during 1960–80, illustrates this possibility of transactions in the land sales market being driven by lack of access to credit and insurance rather than by cultivators' productive inefficiency. In villages that had access to a safety net program, the poor were able to use the land market to augment their landholdings by buying from richer farmers who sold land to undertake productivity-enhancing investments such as digging wells, purchasing pump sets, or paying for their children's education and marriages. By contrast, where such consumption smoothing devices were absent, distress sales to obtain food and medicine accounted for most activity in the land sales market. Thus whether or not households were able to buffer consumption through mechanisms other than land sales during crisis situations had a significant impact on whether markets helped to equalize or dis-equalize land endowments.

Transaction costs related to land sales can take many forms and normally include notary fees, registration fees, and survey costs, as well as any transfer fees. For example, in Russia, even though fees for notaries and registration are not excessive, fees for private surveying are equivalent to two years' of the minimum wage, constituting a significant impediment to overall market activity and reducing the ability of the less wealthy to participate (Rolfes 2002). Transfer fees that are assessed by the public sector can also significantly reduce the extent to which markets function, as in Moldova and the Philippines (Brits, Grant, and Burns 2002). Another important element of the transaction costs is the requirement, in some countries, to have any land sale approved by high political authorities, something that makes foreclosure on land owned by politically well-connected people virtually impossible (Moll 1996). This can lead to segmentation and asymmetry of land sales markets along geographic and social boundaries, a phenomenon that is indeed frequently observed in countries with a dualistic land ownership distribution and relatively undeveloped credit markets (Balcazar 1990; Carter and Zegarra 2000; Munoz 1999). In such situations land sales across farm size classes are virtually absent, but a considerable amount of land transactions occurs within farm size groups, that is, large or small farmers.

All the aforementioned factors will make land acquisition more difficult for poor households and therefore have a clear implication for the extent to which land markets can serve redistributive purposes. In many instances land markets' ability to transfer land, for instance, from inefficient and bankrupt state enterprises to private users, will still not

High transaction costs can result in segmented markets

The redistributive potential of land sales markets is often limited

Well-intended government intervention may not improve outcomes

only be beneficial in terms of efficiency, but will also be conducive to the emergence of a reliable and robust financial system. For this reason an efficient system of land administration that minimizes transaction costs is likely to have considerable benefits.

The possibility of efficiency-reducing outcomes discussed earlier implies that public intervention in land sales markets might, in principle, be justified in some situations. Clearly the most important way in which governments can help improve the functioning of land sales markets is to eliminate distortions that might bias land market outcomes; to help reduce transaction costs that would increase the barriers to participation, especially by the poor; and to improve the functioning of financial markets. Other measures governments have taken to improve sales markets outcomes have proved difficult to enforce, and their main effect has often been to increase transaction costs for participants or to drive land transactions underground, reducing the welfare of all participants. Therefore before recommending intervention, one needs to establish that such intervention can actually be effective in the given environment. Based on experience, the only interventions that appear to be justifiable are temporary land sales moratoria or limits on accumulating extremely large tracts of land in situations of rapid transition.

Empirical Evidence on Land Markets in Different Regions

FOR THE REASONS ELABORATED EARLIER, WELL-FUNCTIONING land rental markets will be most important in situations where land ownership, agro-climatic endowments, and households' skills vary widely or where economic growth, exogenous shocks, or demographic and economic transition call for a quick and flexible adjustment of holding sizes. In many circumstances both imperfections in other factor markets and government regulations imply that the actual performance and incidence of rental markets often differs widely from what would be expected on theoretical grounds. As a consequence, even in regions and settings with similar agro-ecological and economic conditions and land ownership distributions, the extent of land rental market activity often differs significantly between countries (Melmed-Sanjak and Lastarria-Cornhiel 1998). For a better appreciation of the policy issues involved, the following section reviews existing evidence on land rental and sales markets in the world's main regions.

Industrial Economies

Throughout history governments in Western European and other countries of the Organisation for Economic Cooperation and Development (OECD) have regulated tenancy in various forms, in ways that depended closely on the broader constellation of political power. Analysis of tenancy relations in several Western European countries since the late 18th century indicates that changes in land tenure regulations that improved tenants' welfare were closely related to improved parliamentary representation of tenants, high agricultural prices, fiscal crises, and the emergence of nonfarm economic opportunities that weakened the bargaining power of governments dominated by landlords (Swinnen 2002). This implies that regulation has a role to play in helping to enforce property rights and provide information that would reduce the transaction costs of land rental. At the same time, the fact that regulation of land market transactions followed rather than preceded political changes supports the notion that other economic and noneconomic factors are critical determinants of the political bargaining power wielded by individual actors and that the potential for regulation by itself to have an impact should not be overestimated.

In most industrial countries, land rental constitutes an important instrument for gaining access to land under conditions of often rapid structural change. Swinnen (2002) reports that 71 percent of farmland is rented in Belgium, 48 percent in the Netherlands, and 47 percent in France. The share of land rented in the United States increased from 35 percent in 1950 to 43 percent in 1992, much of which involves sharecropping (Dasgupta, Knight, and Love 1999). This illustrates the flexibility of land rental in an environment where security of property rights is high and long-term contracts can be enforced. It also illustrates that land rental is far from "backward" or incompatible with modern forms of operation (Allen and Lueck 1992). One of the advantages of rental rather than sales transactions in these economies is that in a dynamic economic environment, with the possibility of using other assets as collateral, many participants see few advantages in tying up large sums of capital in a land purchase and prefer to invest in other farm-specific assets (Bierlen 2000).

To increase tenants' incentives for making investments with long gestation periods, developing a regulatory and institutional environment where long-term leases can be enforced is important to ensure that rental markets can lead to optimum outcomes. Indeed, many industrial countries regulate rental markets and assist parties in various

Market regulation reduced transaction costs and increased tenants' bargaining power

Long-term contracts and information are critical to achieve optimum outcomes

ways to reduce transaction costs and contribute to broader rural development. Long-term leases and greater market transparency can be beneficial by allowing complementary investments by producers (Barry 2000). The French Society for Land Management and Rural Establishment provides access to information and legal assistance in relation to transfers of farms, both for owners and renters and across generations, to facilitate land access by the young through rental and sales. Attempts by the society to control the land sales markets through rights of pre-emption have not always had the desired effect (Hernandez 2001). Also the costs and institutional requirements associated with this particular model may be too high for the typical developing country where administrative capacity and transparency of the public service are limited (Feher 2001). At the same time, it illustrates that improving the availability of information, reducing transaction costs, and enhancing tenure security can help land markets to contribute to structural change in specific situations, and that local producer organizations can play an important role in helping to bring these effects about.

Eastern Europe and the Commonwealth of Independent States

Land rental was particularly important in the initial phases of the transition

The nature of land rental markets in Eastern Europe and the Commonwealth of Independent States (CIS) is fundamentally affected by the character and status of the transition process. In countries where land was restituted to former owners, short-term rental contracts were of overriding importance as an adjustment mechanism as long as formal property rights still had to be sorted out. This was the case in both urban and rural areas, and provided households that lacked either the ability or willingness to farm their land themselves, for instance, pensioners, with an opportunity to receive a stable return. In all the countries rental markets helped consolidate operational holdings (see Burger 2001 for the case of Hungary). In Moldova, for example, the emphasis on leases enhanced the ability of the land market to develop rapidly compared with, say, Estonia, which had discouraged the use of leases. More than 80 percent of the 440,000 registered private farms in Moldova operate through some type of leasing arrangement (Lerman, Csaki, and Moroz 1998).

The share of producers who lease land in Eastern European countries ranges from 2 percent in Albania with its egalitarian land distribution; between 7 and 8 percent in Bulgaria, Hungary, and Romania; and about 40 percent in the Czech and Slovak Republics. In general, rental

markets contribute to the intergenerational mobility of land, that is, shift it to younger producers, in addition to transferring land to smaller producers and to those with less land but higher capital endowments. In many of the more advanced countries of Central and Eastern Europe (CEE), the share of producers who would like to buy land is significantly higher than the share of those who would like to rent more, indicating that few constraints on rental markets remain, but that sales markets do not yet function well (Deininger and Savastano 2002).

In situations where other markets are either completely absent or highly imperfect, land rental markets are unlikely to bring about a more optimal operational distribution of land. This is illustrated by the case of CIS countries such as Russia. Even though lease markets in these countries are active on paper, only a small share of households (about 7 percent) have taken their land out of a former collective to start individual farming. This implies that land is normally leased back to former collectives, which often pay next to nothing for the land they are cultivating,⁷ and in some cases have stipulated contracts that are difficult for landowners to cancel (Lerman and Brooks 2001). In such a situation, regulation of lease terms may be difficult to implement and is thus unlikely to be effective.⁸ The main reason for such an outcome is that privileged access to machinery, capital, and output and input markets, together with political connections, greatly increase the bargaining power of former collectives. To counter this, better functioning of markets, along with increased access to information to increase landowners' bargaining power, will be needed. This would imply more systematically informing them about their options in relation to land use and ensuring that lease terms are more transparent, that laws providing for the possibility of taking land out of former collectives can be enforced, and that widespread distortions that work against independent producers in output and input markets are eliminated (Duncan 2000; Pomfret 2000). Disseminating information, providing model lease contracts, and registering longer-term leases will reduce transaction costs and, by increasing transparency and ensuring that outcomes reached are "fair" for both parties involved, are likely to be beneficial.

Although long-term leases with clearly identified rents and rights could, in principle, provide many of the advantages of full land ownership, in practice such leases are quite insecure, as demonstrated by the situation with respect to urban land in most countries of the former Soviet Union. The various rules and regulations concerning leases are unpredictable, and in some places lease covenants appear to have developed

Short-term leases are not appropriate for public land if they are not secure and may encourage rent-seeking

into an alternative form of land use control that is associated with high levels of discretion by local governments. Even where long leases are available, the strength of property rights under a leasehold system depends on the courts and has not yet been fully tested. Refraining from use restrictions, instituting fixed or predictable rents, and allowing the transferability of leases are therefore important conditions that need to be met for lease rights to provide incentives that are equivalent to ownership. Where they can be satisfied, as is the case in a number of countries, the provision of long-term leases rather than full ownership can constitute a transitory policy to overcome political concerns associated with full ownership, with relatively minor efficiency losses. As long as local governments' ability to credibly commit to honoring long-term leases is limited, direct transfer of land into private ownership in a way that does not reduce equity may be a more desirable strategy.

The disadvantages of doing so notwithstanding, local authorities in many Eastern European countries have shown a distinct preference for leasing public land. One of the reasons for this is that in the absence of well-developed real-property tax systems, revenues from leasing are higher and more reliable than revenues from taxation. The ability to continue drawing on these revenues, together with a belief that leasing will give local governments greater economic control, are central to the reluctance to move ahead with privatizing public land and enterprises. Tenants prefer leasing because it allows them to avoid up-front purchase prices, which are frequently well above market rates, and there may be many ways for them to avoid payment of full rents. However, given that leases are likely to be much less secure than transfer of ownership, they are likely to reduce investment incentives, especially as local governments may raise rental rates once land has been developed. This is important, especially in systems where the state has a monopoly on land allocation and where governance is weak and corruption is rampant.

Where land is highly fragmented, the transaction costs of rental will be high

In some CEE countries, the high transaction costs associated with land rental have emerged as a constraint in two respects. First, to the extent that landholdings are highly fragmented, assembling a contiguous holding of land large enough to facilitate viable cultivation with machinery requires entrepreneurs to negotiate with numerous small landowners, something that is not only associated with high transaction costs, but also increases the incentives for any of the landowners to engage in opportunistic behavior by threatening to withdraw their piece of the land in an effort to extract a high surplus. Second, for those

renting land to make investments in complementary capital, longer-term contracts are needed. Where these have not emerged, for example, because many owners did not want to commit for the longer term because of the significant uncertainty about the future course of land markets, investment has been impeded. As a result, in some CEE countries there are now more producers who state that they would like to buy land than producers who would like to rent (Deininger and Savastano 2002). This highlights the importance of full clarification of ownership rights to land and the elimination of other obstacles that distort land prices to facilitate the emergence of a financial market that could help support sales transactions.

Such constraints are particularly relevant where insecurity related to the impact of European Union (EU) accession on farm prices, as well as demand for land by foreigners, has thus far limited the potential for sales markets to become active, and the level of activity in these markets remains limited (Mathijs and Swinnen 2001). These insecurities will also affect the cost of other types of interventions to speed the process of consolidation of operational land holdings, which experts often consider to be critical for future productive development of the region.

For private farmers in most Central European countries the highly fragmented land ownership structure, the relatively high transaction costs of renting, and the fact that many urban landowners have no intention of going into farming implies that the potential for land sales markets is high. For example, in Bulgaria 2 million landowners hold 20 million plots, that is, an average of 10 each, with an average size of 0.23 hectare (Kopeva 2002). While the lack of the necessary infrastructure (clear title, cadastre, registries, and so on) to facilitate land sales continues to be a constraint, governments in most of the countries are implementing programs to address this issue. High transaction costs, including government-imposed transfer fees, are, however, a serious obstacle to market development.

In many Eastern European countries the purchase price of land is significantly above the capitalized value of agricultural profits (Deininger and Sarris 2002) because of government restrictions that drive up land prices, as well as speculation about the benefits of joining the EU and the demand by foreigners that might materialize with EU accession in both Eastern and Central European countries. Although peri-urban land markets and some mortgage lending are starting to develop in a number of Eastern European, and even CIS, countries, activity in sales markets for agricultural land remains low (Deininger and Savastano 2002).

An uncertain economic outlook reduces the extent of sales market activity

Inability to physically identify plots hinders market development

Even where productive land does not seem to have been overvalued, as in Moldova, the use of land as collateral is extremely limited, and providing access to credit, including finance for land purchases, through cooperatives or the use of movable collateral often provides a more immediate option (Chiriac 2002). In CIS countries that have not yet physically demarcated individual land plots in former collectives and where mortgaging agricultural land remains prohibited, land market activity is obviously even lower, and is restricted to peri-urban areas—for example, in 2000 fewer than 1,500 land mortgages were recorded in the whole of Russia (Overchuk 2002).

While the privatization of agricultural land has reduced the Russian government's ability to interfere in production decisions, much needs to be done to improve agricultural productivity and use its potential for stimulating rural growth. Ill-functioning land sales markets make the transfer of land resources to more efficient producers difficult. The authorities often viewed the distribution of land shares to members of former collectives as a transitional tool on the road to reformulated large farms, rather than as a step toward creating smaller farm units and did not draw up parcel boundaries. Market transactions are limited, because holders of land shares prefer to rent to the reconstituted collectives to derive a continuing income, and even if they did sell their shares, few savings instruments are available in which they could invest the proceeds.

A danger of speculative concentration may justify high land ownership limits

In the typical transition environment, where risk is high, access to input and output markets is imperfect, and information on legal options is limited, politically and economically powerful former managers of collective farm enterprises have often been able to induce the new owners to re-invest their land shares in a reformulated collective. Unless provisions for their protection are in place, bankruptcy of the collective would imply that the owners of land shares would lose their assets, which by passing land into the ownership of creditors could re-create a highly concentrated land ownership structure, with all the associated negative impacts on equity and efficiency. The fact that in Russia some large conglomerates have acquired millions of hectares of land for speculative purposes, largely because they expect it to be valuable for mineral extraction, suggests that such concerns can be of empirical relevance (Uzun 2002). To prevent such speculative acquisition at prices that are well beyond the actual value of the land, it will be important to inform landowners about their rights and educate them about the value of land in the longer term. As long as such knowledge remains limited, high limits on land ownership (in the thousands of hectares) may also be justified.

Box 3.1 The scope and flexibility of land rental contracts in West Africa

GHANA'S COCOA SECTOR CAN ILLUSTRATE HOW markets and the contracts used in them evolve dynamically in response to increasing land scarcity. In the early 19th century a share contract (the *abusa*) emerged as a way to attract migrants who were interested in establishing plantations, but did not have enough capital to buy land. Migrants received land on which they established a cocoa farm and gave one-third of the developed area or one-third of the yield back to the original owners of the land. By the 1960s more than 95 percent of the land was cultivated by

migrants who had acquired land in this way. With increasing land scarcity, the practice became less common, the terms of the contract shifted in favor of landowners to a 50 percent share contract (the *abunu*), and the increasing formalization of contracts ensued. Contracts are now signed in front of witnesses, who receive a fee, and are perceived as more secure than within-family access to land, where elders can behave opportunistically or even disinherit their family members. Agro-industry has also developed similarly structured outgrower arrangements with share tenants.

Source: Amanor and Diderutuah (2001).

Africa

Evidence from Africa highlights that country- or region-specific constraints on land market activity that are associated with government intervention have a significant impact on land rental market activity. In West Africa, where colonial administrations never seriously questioned land ownership by indigenous communities and instead aimed to integrate local populations into commercial production, rental markets have a long tradition and have evolved in a dynamic way in response to environmental conditions. Complex mechanisms to transfer land and tree rights for varying periods have been common since the 19th century and are often linked to recipients making long-term investments, as in the humid areas of Benin, Cameroon, Côte d'Ivoire, Ghana, Nigeria, and Sierra Leone (Adesina and Chianu 2002; Amanor and Diderutuah 2001; Chauveau 2000; Edja 2001; Manyong and Houndekon 2000). The case of Ghana (see box 3.1) illustrates the flexibility of contractual arrangements and their adjustment to changed factor scarcities.

At the same time high levels of population growth with limited development of the off-farm economy have led to increased scarcity of land, higher rental rates, and a tendency for rental transactions to become more widespread and formalized, often with the use of formal witnesses. In many cases this has led the young to contest land transactions conducted by their parents, especially if these involved immigrants or ethnic

Rental markets are active in West Africa

Government intervention undermines rental in some East and South African countries

minorities. This suggests that in addition to more rapid nonfarm development to help alleviate the land constraint, clarifying and formalizing contracts could have benefits in terms of land productivity and conflict avoidance and resolution.

In Southern Africa, by contrast, rentals are rare, partly because of relative land abundance, but mostly because of the earlier rigid division of the land into native reserves, which were used mainly for semisubsistence producers, and areas reserved for whites, which depended on migrant workers (Otsuka 2001; Place 1995; Zeller, Diagne, and Kisyoumbe 1997). While many of the regulations that had historically precluded the development of a land rental market have been eliminated, land reform policies and the passage of strong tenancy protection laws in some African countries continue to affect the development of the market. In Ethiopia, a land policy that makes land rights conditional on residence in the community discourages off-farm activities and migration. In the absence of investment and technological advances, the adoption of which may be affected by insecure tenure and the inability to use the land as collateral, such a tenure regime has been claimed to run the danger of leaving agriculture in a Malthusian trap (Rahmato 1997).

In other countries of Eastern Africa, both land sales and rentals appear to be relatively active and appear to contribute to the equalization of operational or even ownership holdings of land, as confirmed for the case of Uganda (Baland and Platteau 1998; Carter and Wiebe 1990; Place 1995; Platteau 1996). Evidence from Uganda also suggests that activity in rental markets has increased sharply with economic liberalization and the associated growth of opportunities in the nonfarm economy; indeed, the share of households renting land increased from 13 percent in 1992 to 36 percent in 1999 (Deininger and Mpuga 2002).

Most empirical studies imply that in line with theory, land rental helps to improve efficiency and transfers land to those with low land endowments. Data from Sudan suggest that land rental markets transfer land to smaller producers (Kevane 1996). In western Ghana, Estudillo, Quisumbing, and Otsuka (2001) show that tenancy transactions have equalized the operational land distribution. Case study evidence also suggests that such temporary land transfers have a positive impact on equity, being generally pro-poor and beneficial for women (Place 2002). Despite this positive outcome, a number of countries still fail to formally recognize land rental transactions (Delville 2002). Others link the ability to maintain land rights to residence in a village or to continued cultivation. This neither enhances efficiency nor is in line with tradi-

tional practice whereby households could migrate out and still retain their land allocation rights. In Uganda, by transferring land to more productive producers, rental markets facilitate greater allocative efficiency in rural areas (Deininger and Mpuga 2002). Moreover, evidence from Ethiopia suggests that restrictions on land rental not only reduce the opportunity for more productive use of land, but may also constitute an effective obstacle to the development of the nonfarm sector, as farmers who had taken on nonfarm jobs perceived a significantly higher risk of losing land through redistribution than those who engaged in self-cultivation (Deininger, Jin, Adenew, Gebre-Selassie, and Demeke 2003).

Evidence suggests that higher levels of population density, commercialization of agriculture, and migration increase activity in African land sales markets. Observers have looked at market transactions in Ghana, Nigeria, Sudan, Tanzania, and elsewhere (Feder and Noronha 1987). In central Uganda, 58 percent of landholders reported that they had purchased land as early as the 1950s (Barrows and Roth 1990), and land sales markets seem to have been quite active ever since (Place 1995; Roth, Bruce, and Smith 1994). In Ghana the proportion of land acquired through purchase from individuals, which averages between 4 and 5 percent, reached 18.8 percent in migrant villages (Quisumbing and Otsuka 2001). In South Africa, even though markets remain thin, some purchases by formerly disadvantaged households are emerging (Lyne and Darroch 1997).

While this suggests that informal land sales markets are fairly active in some African countries, little analysis is available on either how market prices compare with capitalized values from agricultural production or how such markets affect the productivity of land use. Evidence from Uganda suggests that actual purchase prices for land, while lower than cultivators' self-assessed land values, are high compared with profits from agricultural production, implying that land carries some premium as a store of wealth. This would limit the scope for acquisition of land by poor but efficient producers, a hypothesis that is supported by the fact that productivity is not a significant determinant of participation in land sales markets. At the same time, the fact that rental markets are active implies that there is little negative impact on either productivity or land access overall (Deininger and Mpuga 2002). More evidence on the links between land rights, migration, and off-farm participation would be desirable.

While the activity of land sales markets is highest in peri-urban areas, evidence from this sector also illustrates that legal and institutional restrictions often prevent the formalization of transactions. The fact that land sales are often authenticated by written sales agreements

Sales market activity varies widely, even in the same country

Informality of sales can lead to conflict

that are witnessed by a number of people, including local notables, local government officials, and sometimes even lawyers (Kironde 2002), clearly demonstrates a desire for greater formalization of transactions. Instead of forcing them into informality, something that will both increase the likelihood of them being disputed in the future and reduce the price that sellers will be able to obtain, governments should take appropriate steps to recognize informal transactions. Recognition of such transfers may be a low-cost way to prevent future conflict, especially in peri-urban environments, where because of population growth or in-migration, land prices are often increasing rapidly.

Asia

Government regulation accounts for large differences in land rental activity

In addition to traditional factors such as population density, the ownership distribution of land, and the emergence of nonfarm opportunities, the regulation of tenancy in some Asian countries but not others appears to have given rise to considerable differences in tenancy rates. In the 1990s the proportion of tenant households (including pure tenants and owner-tenants) was high in Bangladesh, Pakistan, and the Philippines; modest in Indonesia; and low in India and Thailand. While a relatively egalitarian distribution of land, together with the availability of forestlands that until recently could be used to expand cultivation, appear to account for this low rate in countries like Thailand, the reason for low tenancy rates in India is likely to be related to land reform regulations that prohibit tenancy (Radhakrishnan 1990; Ray 1996; Thimmaiah 2001; Thorat 1997). Even if some tenancy has moved into informality, this could have important welfare effects (Deshpande 2002). In Bangladesh (Hossain 1978) and India (Pant 1983; Skoufias 1995) small farmers rent from large ones, although other studies report tenancy contracts within farm size classes in India (Sarap 1998; Sharma and Dreze 1996; Swamy 1988).

Rental markets can develop rapidly and generally benefit the poor

Land rental markets have started to emerge in Asian countries that have recently liberalized land tenure arrangements, such as China and Vietnam. In China, where until recently rental was not needed because of frequent land reallocations, the share of households participating in land rental arrangements increased significantly from 2.3 percent in 1995 to 9.4 percent in 2000. Moreover, 22.4 percent of households indicate that at the current market rate they would be willing to rent (Deininger and Jin 2002), suggesting that with economic development and greater emergence of off-farm opportunities, the potential for fur-

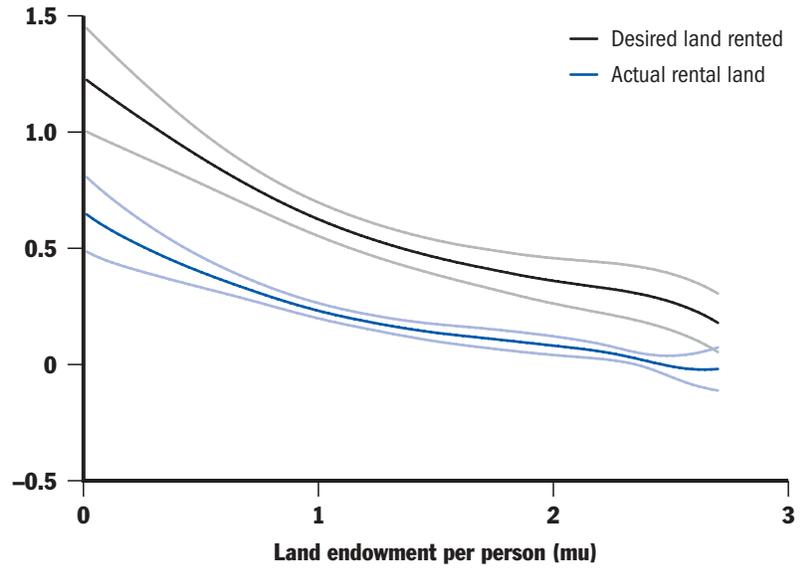
ther increases in rental market activity is considerable. This can be advantageous not only for productivity, but can also help consolidate the high levels of fragmentation currently characterizing the Chinese countryside. A similar increase in the incidence of land rentals over time is apparent in Vietnam in an environment that started from a highly egalitarian allocation of land. In 1992 only 3.8 percent of rural households participated in land rental, compared with 15.8 percent in 1998, with more productive households being significantly more likely to rent (Deininger and Jin 2003).

In an environment of rapid economic change, allowing markets to reallocate land across households with differential endowments or abilities can help attain significant gains in efficiency and equity (Benjamin, Brandt, and Rozelle 2000). Figure 3.1, which provides a nonparametric regression (including 5 percent confidence bands) of actual and desired rentals in China against holding size and a measure of households' productive efficiency or ability, illustrates not only that the rental market shifts land to more productive and land-poor producers, but also that a considerable unsatisfied demand for land rental exists. The latter can be seen by comparing the thick line, which refers to actual land market participation, to hypothetical participation at existing prices. This suggests that reducing the constraints imposed on land rental would allow markets to contribute to greater equalization of endowments across households, thereby improving productivity and income distribution and increasing the welfare of those concerned.

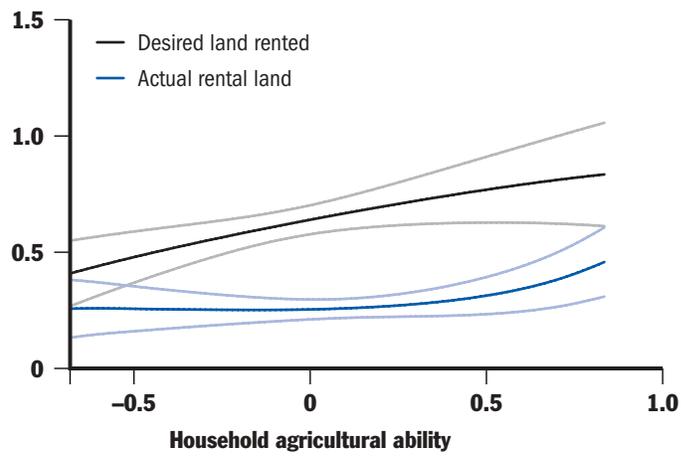
Because of differences in ability across households that village officials cannot observe, decentralized land markets will be better suited to achieve the associated efficiency and equity gains than administrative mechanisms. As the differences in skills across households normally become more important with economic growth and the emergence of off-farm opportunities, for a society to shift from an allocation of operated, as distinct from owned, land that is completely egalitarian to a situation where operational holding sizes are determined by supply and demand at the local level will become increasingly advantageous. Indeed, rental markets have developed quite rapidly following the implementation of more secure property rights and the elimination of local restrictions on rental. Compared with administrative allocation by village cadres who have only limited opportunities to observe ability, land rental markets allow more productive households to gain access to land and thereby increase output by about 12 percent, holding other things constant (Deininger and Jin 2002). This suggests that in an

Figure 3.1 Actual and desired rental land, China

As a function of land endowment
Mu (1 mu = 0.067 hectare)



As a function of household agricultural ability
Mu (1 mu = 0.067 hectare)



Note: Bootstrapped confidence bands are given for each line.
Source: Deininger and Jin (2002).

environment where land ownership is distributed in an egalitarian fashion, decentralized land rental markets permit realizing much greater productivity gains than would be possible under administrative reallocation of land without the danger of negatively affecting equity. This seems to be one of the reasons why countries such as China and Vietnam are increasingly restricting the scope of administrative reallocation and loosening restrictions on land rental as the nonfarm economy develops (Turner, Brandt, and Rozelle 1998).

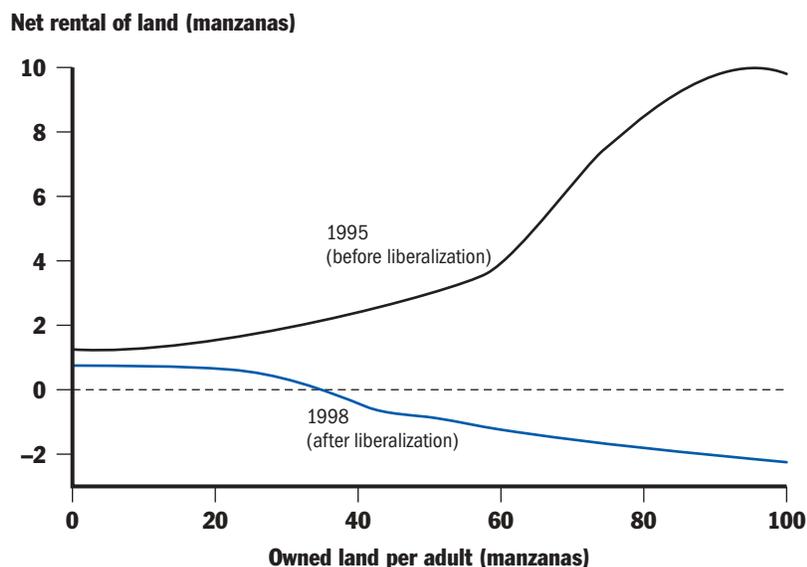
In a number of Asian countries, such as Cambodia, China, and the Lao People's Democratic Republic, the state or the collective still owns the land, and insecurity of rights often implies that formal sales markets do not exist, although observers report many informal, short-term transactions. An analysis of the impact of sales of land use rights in Vietnam reveals moderate levels of activity in the sales market depending on the region. Although buyers were generally characterized by higher productivity, there is some evidence of distress sales in the sense that households that experienced significant income loss were more likely to sell land. However, better functioning of credit markets was found to attenuate this effect, implying that liberalizing land sales markets will be less problematic in areas where access to rural finance is assured (Deininger and Jin 2003). Contrary to this, in Sumatra, Suyanto, Tomich, and Otsuka (2001) find that land sales transactions contribute to greater inequality of landholdings compared with rentals, which help equalize operational holdings.

Latin America

Given the high inequalities in land ownership, one would expect the scope for efficiency- and equity-enhancing land rental transactions in Latin America to be large. Contrary to that expectation, rental activity in many countries is actually quite limited, something that can be explained to result from informational imperfections and the ensuing high transaction costs, as well as the impact of past restrictions on rental markets that have weakened landowners' perception of the security of their property rights. The impact of rental restrictions has been significant. For example, in Colombia the amount of formally rented land decreased from 2.3 million hectares in 1960 to 1.1 million hectares in 1988 following the imposition of rent ceiling legislation (Jaramillo 2001), and much the same occurred in Brazil. Land rental restrictions also led to widespread tenant evictions in many Latin American countries. While in many cases the restrictions have been

A legacy of rental market restrictions affects market activity

Figure 3.2 Land rental before and after agricultural market liberalization, Nicaragua



Note: 1 manzanas = 0.699 hectare.
 Source: Deininger and Chamorro (forthcoming).

repealed, participation in rental markets continues to remain limited. In 1998, more than a decade after the rental restrictions had been lifted, tenancy rates in Colombia were still only about 11 percent, way below their 1960s' level, highlighting that restoring confidence in the property rights system takes time (Deininger and Gonzalez 2002).

In Nicaragua 22 percent of producers participated in rental markets in 1998/99. Even though the areas involved were small and contracts were typically short term, a comparison with 1995 data indicates that the elimination of subsidies has considerably improved the rental market's tendency to shift land to land-poor producers (Deininger, Zegarra, and Lavadenz forthcoming). This impact of economic policies on rental market outcomes is illustrated graphically in figure 3.2 using nonparametric regressions and shows that before economic liberalization in 1998, rental markets shifted land from small to large farmers, whereas the opposite was true after disproportionate protection for large farmers had been eliminated in the context of macroeconomic liberalization.

Case studies from a number of other Latin American countries show that the main factors limiting land rental transactions are weak property rights and the lack of reliable conflict resolution mechanisms (Bastiaan

and Plata 2002; Jaramillo 1998; Zegarra Méndez 1999). The ensuing insecurity implies that landowners are reluctant to rent out for fear that tenants will establish a claim to the land. Hence rentals are few, informal, short term, and often limited to closely related people to facilitate enforcement. The legacy of intervention, together with the external shocks and financial crises experienced during the 1990s, may explain why, even though a distinct effect of land market liberalization on rental activity can be observed, the magnitude of this effect has been less than might have been expected at the outset (Barham, Carter, and Deininger 2003).

Given that one of the main preoccupations of government policies in Latin America has been to provide poor but productive producers with land, a comparison of the results of decentralized rental with those of centralized land reform efforts is of interest. In the case of Colombia, Deininger and Gonzalez (2002) show that rental markets have been much more effective than government-sponsored land reforms in bringing land to productive and poor producers, similar to what was observed in the case of China (Deininger and Jin, 2002). This implies that land reform efforts may benefit from making greater use of land rental markets, or even from taking specific measures to increase activity and improve the outcomes from the operation of these markets.

While land purchase prices vary widely, recent macroeconomic liberalization and the associated elimination of special privileges for large producers have helped to lower land prices considerably, thereby reducing incentives for speculative land acquisition and bringing prices more in line with profits from agricultural cultivation. For example, in Brazil land prices dropped by up to 70 percent in the early 1990s (Bastiaan and Plata 2002), making it easier to acquire land for productive purposes. Much the same occurred in Colombia, where the overall level of land purchase prices is now more in line with productive returns (Lavadenz and Deininger 2002). Although lower land prices would be expected to increase the demand for land sales transactions, low international commodity prices imply a need for those acquiring such lands to make additional investments to allow a shift to other crops. The undertaking of such investment may be prevented by the lack of the necessary marketing infrastructure and technology or the absence of, or high transaction costs associated with, rural credit.

Land sales markets in Latin America are relatively active, with average annual turnovers of 5 percent in Colombia, 2 to 3.5 percent in Venezuela,⁹ 1.4 to 2 percent in Ecuador, and 1 percent in Honduras (Jaramillo 2001). However, even in situations where activity is high,

Land rental can provide land to productive but poor producers

Even where they are active, sales markets are often segmented

markets are often found to be highly segmented implying that sales involve either from large to large or from small to small producers but rarely across different farm size groups. Such segmentation of land sales markets is also observed in Nicaragua (Carter and Chamorro 2002). It is in part due to the cost of subdivision and high transaction costs, and in part due to lack of long-term financing for the poor associated with the continent's dualistic land ownership structure (Barham, Carter, and Sigelko 1995).

Land markets' limited capacity to help equalize land ownership in an environment characterized by highly unequal land access is illustrated by the ambiguous impact of export booms in crops where smallholders have some comparative advantage. In Guatemala, an export boom in winter vegetable products induced a transfer of land from larger farms to smaller farms. Farms that began with relatively large holdings (3 hectares) did not increase their landholdings significantly after the boom period, while those households that had less than 1 hectare prior to the boom and who began producing boom crops expanded their landholdings significantly (Barham, Carter, and Sigelko 1995). By contrast, in Paraguay an agricultural export boom led to sharply increasing real land prices and increased land access by the largest-farm-size class, presumably because of its better access to credit and markets. Outside the boom area, small farmers were little affected, and in some cases even continued to accumulate land (Carter and Galeano 1995).

This suggests that the purchase market does not operate as a mechanism of land access for labor-abundant, capital-constrained households, but that agents that are not capital constrained can translate relative technical efficiency into effective demand for more land (Carter and Salgado 2001). The importance of capital constraints as a determinant of outcomes observed in land sales markets is also illustrated by mobility analysis of small producers who benefited from Chile's land reform. While upward mobility by these households is extremely limited, the analysis shows substantial upward mobility by a new class of well-financed, often nonagricultural professionals and business people who purchased land from the original beneficiaries (Carter, Barham, and Mesbah 1996), which has led some to characterize Chile's agricultural export boom as exclusionary (Jarvis 1989; Ortega 1988). This interpretation is supported by the fact that only 20 to 30 percent of those who sold their farms did so because of a lack of interest in farming or because of old age (Echenique and Rolando 1991). Observers noted similar patterns of land concentration triggered by export booms in several Central American countries in the 1970s and 1980s.

Policy Implications

THE FOREGOING EVIDENCE INDICATES THAT LAND RENTAL markets have considerable potential to improve productive outcomes, suggesting that failure to harness their potential could forgo large equity and productivity benefits. To realize these benefits governments need to ensure that tenure security is high enough and to explore options for eliminating unjustified restrictions on the operation of land rental markets. While limitations on land sales markets may be based on a stronger conceptual foundation, efforts to implement such restrictions have almost invariably weakened property rights, implying that their unintended negative consequences have often far outweighed the positive impacts they were intended to achieve, especially as such restrictions may often be evaded. Because activity in land sales markets is normally low or highly localized in most developing countries, getting credit markets to function well is more effective than centrally imposed limits on land transactions, with the exception of loose restrictions on land ownership in situations of rapid change.

Land Rental Markets

Tenure security is a key precondition for the operation of land rental markets. Indeed, the level of tenure security and of trust in the long-term security of land rights seem to be key elements in explaining the large variation in the incidence of rentals across countries. However, the literature has not paid sufficient attention to this issue. Where land tenure is not secure, landlords who rent out will run the risk of not being able to claim their land back, implying that tenure security is especially crucial for the emergence of long-term contracts. Evidence from Western European and other industrial countries suggests that with secure long-term rights and long-term rental contracts, many entrepreneurs with limited capital endowments may actually prefer to rent than to buy land.

In Vietnam the provision of secure, long-term land rights, even at an informal level, increased the volume of rental transactions benefiting poor but productive households (Deininger and Jin 2003). In the Dominican Republic insecure property rights not only reduce the level of activity in the rental market, but also induce market segmentation, that is, rentals are restricted to pre-existing social networks (Macours 2002). In Nicaragua, Deininger and Chamorro (forthcoming) show that insecure tenure

Tenure security is a critical precondition for rental markets to function

Secure tenure is particularly important for long-term contracts and investment incentives

reduces participation on the supply side of the land rental market. In Thailand, Brits, Grant, and Burns (2002) report increases in the incidence of land transactions after titling. In Ethiopia the fact that any land that is not self-cultivated by the owner for two seasons can be confiscated is a major impediment to the emergence of a rental market and off-farm migration (Deininger, Jin, Adenew, Gebre-Selassie, and Demeke 2003). Government intervention that undermines landowners' rights to land can thus reduce the extent of rental market activity.

Unless secure long-term contracts are available, the incentive for either tenants (who may be the only ones with the labor and information available to do so) or for landlords (who may have the needed capital) to make investments in land may be severely limited. The ability to adjust for this type of market failure without long-term contracts that can be enforced in a credible way is limited. The existence of long-term rentals in many parts of the world implies that rental contracts can be adjusted to avoid disincentives to land-related investment. At the same time, in situations where past policies undermined either the security of tenure or producers' ability to enter into unrestricted rental contracts, restoring trust and providing the level of tenure security needed for long-term rentals may not be feasible in the short term. Where, as a consequence, long-term and secure rental contracts are not an option, land rentals may need to be complemented with other mechanisms to facilitate the socially most desirable level of land transfers across producers.

Because of concerns about the loss of efficiency that could result from sharecropping or a view that tenancy is an exploitative relationship, governments in many countries tried to either limit sharecropping or regulate rental in a way that would improve the welfare of tenants. While motivated by considerations of social justice, such interventions had implications for productivity that often affected their ability to contribute to social goals as well. Furthermore, to improve the equity outcomes from rental markets in urban and rural areas, governments have often imposed rent controls or ceilings on the amount of rent landlords can charge, all aimed to increase the security of tenure enjoyed by tenants.¹⁰ In many cases this led to large-scale self-cultivation by landlords or the adoption of wage labor contracts, both modes of production that are inferior to tenancy in terms of production incentives and outcomes (Ray 1999). Indeed, studies show that implementing tenant protection and rent ceilings effectively is not easy and that where implementation is incomplete, they can easily reduce land access and thus equity, contrary to the professed goals. For example, estimates indicate that the introduc-

tion of tenancy legislation in India was associated with the eviction of more than 100 million tenants, which caused the rural poor to lose access to about 30 percent of the total operated area (Appu 1997). Furthermore, by threatening landowners who lease out with the loss of their land, the legislation has driven tenancy underground, thereby reducing the opportunity for greater land access through rental markets and greatly reducing informal tenants' bargaining position and their ability to enforce contract terms.

Realizing that rent controls without tenant protection will simply lead to widespread evictions, many Indian states have introduced more comprehensive tenancy reforms that combine low limits on rents with protection of tenants against eviction. The intent was to improve cultivators' status and welfare, and the reforms contain three main elements: (a) the imposition of rent ceilings; (b) the award of permanent rights to tenants, subject to landowners' rights to retention; and (c) the transfer of ownership rights to tenants on lands not claimed by landowners. Such reforms met with considerable resistance by landlords and were therefore difficult and costly to implement. Indeed, of all the Indian states only West Bengal, after a communist victory in state elections in 1973, mounted an effective campaign for tenant registration. Analysis suggests that the impact of doing so was positive and that agricultural productivity increased (Banerjee, Gertler, and Ghatak 2002). Tenants' ability to subsequently acquire limited amounts of land through the regular sales markets reportedly also increased slightly (Rawal 2001). For India as a whole, tenancy reforms affected poverty reduction, but not productivity growth (Besley and Burgess 2000), suggesting that a productivity impact requires significantly more than just passage of a law. This is in line with land reform experience in Japan and Korea, where similar tenancy reforms were rapidly implemented.

Conceptual arguments also indicate that while rent controls can transfer some resources to tenants, they tend to make everybody worse off by restricting the supply of land available to the rental market, undermining tenure security, and reducing investment (Basu and Emerson 2000). Examples from a number of countries support the argument that rent controls are normally an inefficient way to transfer resources for a number of reasons. First, implementing tenancy laws is costly in terms of economic resources and administrative capacity. Second, rent ceilings will invariably reduce landlords' investment incentives and possibly their willingness to rent out, implying losses in productivity. Finally, the benefits from rental legislation are largely confined to current tenants, and the

Effective implementation can lead to productivity gains, but rent controls are unlikely to be an efficient way of transferring resources

Rent controls reduce investment and the functioning of rental markets

imposition of tenancy regulation will decrease the supply of land rentals and access to land or housing by those who did not have a contract at the time when the legislation was promulgated, that is, the landless and the extremely poor. In South Africa, tenancy protection laws that were passed as an interim measure until more comprehensive land reform would be implemented could, in the absence of such reform, well end up undermining options for land access by the poor. In Asia, the negative long-term effect on land rental market activity is often exacerbated by the prohibition of subleasing by tenants who benefited from tenancy reforms or their heirs.

Moreover, rent or price regulation often obstructs the functioning of land markets at the urban periphery, forcing large numbers of migrants who are continuing to come to the cities into slums and informal settlements, where they have to subsist without access to needed services and often at high prices. This deprives them of incentives for housing-related investment and may limit their ability to obtain credit to improve their livelihoods and provide employment for others. Efforts to promote equity by using rent or price regulation have proven to be ineffective and costly, and where warranted other channels, such as targeted subsidies, would have been more effective (Renaud 1999). Although there are many instances where tenancy continues to be widely practiced despite its legal prohibition, the de facto illegal nature of the tenancy relationship might provide landlords with additional leverage that they can use to bargain down the reward to tenants. The unofficial nature also prevents including tenants in structures that are often essential to ensure governance and sustainable resource use at the local level, for example, water users' associations. Even in India considerable discussion is now under way about eliminating rent ceilings to facilitate greater access to land by the poor (Saxena 2002). More in-depth study of specific steps in particular settings is warranted, including the possibility of small farmers renting out to large landlords (a phenomenon known as "reverse tenancy") and its implications.

The foregoing discussion and the strong evidence suggesting that short-term land rentals will contribute significantly to efficiency and equity imply that land rental restrictions have no merit. Legal or other restrictions on the functioning of rental markets that continue to be in place in many countries—for example, China, Ethiopia, and India—will have a negative impact on agricultural productivity and households' welfare; will discourage investment, off-farm employment, and migration; and will increase the insecurity of land rights. Similarly, sharecropping has long been recognized as a second-best solution under

given constraints. Ample evidence indicates that eliminating this contractual option leads would-be renters to rely on wage labor, which is both less efficient and less equitable, and that abolishing restrictions on rental markets would be desirable. While some evidence suggests that rent ceilings and tenancy restrictions can transfer resources to the poor in the short term, both theoretical and empirical analysis suggests that the long-term impact will not be advantageous to the poor. At the same time basic preconditions, such as the security of property rights, the ability to enforce contracts at low cost, and the availability of the necessary information, are key to facilitate the longer-term contracts that will be needed to cope with structural change. To a large extent, the magnitude of the impact of tenancy on equity and investment in the longer term will depend on these factors. The only relevant policy questions are how to sequence the elimination of rent ceilings and other restrictions on tenancy in a way that minimizes disruptions, ensures that sitting tenants will be compensated for any investments they have made, and avoids negative equity impacts.

In addition to eliminating distortions and undertaking measures to improve the functioning of other factor markets in rural areas, steps to reduce the transaction costs associated with land transfers, for example, through better land records or standard contract formats (which the individual parties can adopt or not as they choose) and default regulation of tenancies, provide an opportunity to improve the level of activity in land rental markets.

Tenancy has long been viewed as an important transitional stage that allows peasants to accumulate capital and gain agricultural experience, therefore eliminating sharecropping as a rung on the agrarian ladder, will not contribute to equity in the long run. The unavailability of sharecropping as a contractual option is also likely to be associated with considerable inefficiency in production, especially where risk and credit market constraints impede the functioning of fixed rent markets. Bans on sharecropping or the imposition of a low ceiling on landlords' share therefore have no merit and may lead to large efficiency losses. Collier (1989), for example, estimates static efficiency losses of more than 10 percent associated with the unavailability of share contracts in Kenya. In view of the theoretical analysis and empirical evidence that suggest that outlawing sharecropping will be neither feasible nor cost-effective, only a few governments continue to openly advocate such a far-reaching measure. At the same time restrictions on rental in more general terms still continue to be widespread.

The benefits of eliminating rental restrictions could be large

The elimination of restrictions on land rental in Mexico's *ejido* sector illustrates not only that regulation can have far-reaching impacts even in cases where in practice it is widely neglected, but also that in pursuing this goal, legal and institutional changes need to go hand in hand (Deininger, Bresciani, and others 2002). As in the case of India, many of the restrictions imposed on land leasing in Mexico were widely circumvented in practice. Nonetheless, since the large-scale transfer of land into *ejido* tenure in the 1920s and 1930s, restrictions on the ability to rent out or sublease *ejido* land appear to have led to disproportional concentration of poverty in *ejidos* (Gonzalez and Velez 1995). Comparison with the private sector, where no such restrictions existed, suggests that rental market restrictions were associated with reduced land market activity; land underutilization; limited opportunities for the poor to access land; lower incentives for investment; and increased susceptibility of households to threats and extortion by local authorities who, in theory, had the right to withdraw the land allocation of anybody who engaged in land rental (Zepeda 2000). As illustrated in box 3.2, recent reforms that eliminated these restrictions not only had a discernible impact on governance at the local level, but also had a significant and positive impact on activity in rental markets and household welfare (World Bank 2002a).

Land Sales Markets

The discussion thus far implies that even if land sales are not restricted, land sales markets are likely to be much less active than land rental markets virtually everywhere in the world because of higher transaction costs, difficulties in accessing long-term capital to finance land purchases, and insecurity about future economic developments that would significantly affect land prices. On the supply side some evidence indicates that in an environment with limited insurance markets, exogenous shocks can lead to distress sales of land. On the demand side distortions in product markets, together with imperfections in credit and financial markets, will have an immediate impact on the way in which land sales markets function and, in a number of cases, for example, Colombia Nicaragua, and Uganda, seem to be important enough to imply that sales markets can be less productivity enhancing than rental markets.

Not surprisingly, in view of the manifold obstacles that may affect the functioning of land sales markets, these markets have attracted even more attention and government intervention than rental markets. This

**Government restrictions
on land sales have rarely
achieved desired outcomes
cost-effectively**

Box 3.2 The impact of eliminating restrictions on land rental

THE 1992 *EJIDO* REFORM IN MEXICO ILLUSTRATES two issues. First, it shows that group rights can be perfectly consistent with secure land tenure by individuals, and that if adopted with a view toward making institutions more accountable, they can have a significant impact on governance. Second, it illustrates that even without full ownership rights, efforts to improve the functioning of markets can significantly increase land market activity thereby increasing access to land by more efficient producers as well as participation in the off-farm economy.

The legal changes to recognize group tenure consisted of three main elements. First, the legal status of the *ejido* was enhanced by recognizing the legal personality of *ejidos* and vesting the general assembly of all members with the ability to regulate internal matters, including establishing joint ventures with the private sector and regularizing land ownership within the *ejido*. To ensure that these sensitive questions could be tackled without the political interference that had traditionally charac-

terized the *ejido* sector, a procedural framework was established, including rules for decisionmaking. A second element was the liberalization of land markets. Land rental transactions were completely freed, while land sales were allowed within the *ejido*. Finally, and most important, *ejidos* could undergo a voluntary program of land regularization that, in a participatory process, helped to establish and demarcate the boundaries of community land. With a 75 percent majority the *ejido* assembly could decide which of the community lands should be parceled out to individuals and which should be held in common property, or whether landowners in the *ejido* should be allowed to make the transition toward a private property regime. In all cases households receive certificates that document their share of the land. Studies show that this increased transparency led to increases in rental market activity and household welfare and to improved governance without the sell-off that many of the program's initial critics had feared.

Source: World Bank (2002a).

section briefly discusses the different forms such interventions have taken and their impact. The conditions under which land sales markets would cause significantly negative effects are, however, likely to be quite localized and time specific. Restrictions on land sales markets that may be perceived as appropriate in one location or at one point in time may be highly inadequate in other situations or at other times. Experience worldwide supports the view that blanket restrictions on the functioning of markets are likely to be evaded and may have undesirable side effects. Indeed, few of the restrictions that countries have imposed have had lasting positive effects, and most of them were either difficult or impossible to enforce and have had many unintended and negative consequences, including the growth of bureaucracies to enforce them. Two possible exceptions might be justified in specific situations where the external environment is changing rapidly. One is the imposition of

high land ownership ceilings. The other is that if transparent mechanisms for decisionmaking are available and local communities bear the costs of their decisions, they may be given the authority to restrict the transferability of land as is the case in most customary systems. The expectation is that with changing economic circumstances, restrictions will be relaxed. Where transparent mechanisms are unlikely to prevail, the preferred policy should be to forgo restrictions.

Transferability Restrictions

Restrictions on the transferability of land reduce credit access

Governments have frequently imposed restrictions on the transferability of land through the sales market on beneficiaries of land reform or settlers on formerly state-owned land to prevent them from selling or mortgaging their land. Such a restriction could be justified as a temporary measure to prevent the beneficiaries of a land reform program from selling their land based on inadequate information or in response to temporary imperfections in product and financial markets. Even temporary restrictions on land mortgages can be counterproductive, however, as they would deprive beneficiaries from accessing credit during the establishment phase when they need it the most. The literature has reported cases where farmers were forced to resort to less efficient arrangements, such as usufruct mortgaging and use of wage labor, to gain access to credit (Hayami and Otsuka 1993). Investigators have also noted this problem in Korea (King 1977) and in the Philippines (Chuma, Otsuka, and Hayami 1990), where restrictions on land market activity have limited investment. Land received under land reform in Chile was freely transferable, and Jarvis (1985) views this as one of the key ingredients of its success. Precluding land reform beneficiaries from sales in the medium term would reduce efficiency by preventing adjustments in response to differential beneficiary abilities, and could, if combined with rental restrictions, cause large tracts of land to be underutilized. The danger of beneficiaries' undervaluing their land could be reduced through other means, and 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 to technical assistance, and by providing safety nets during disasters to avoid distress sales.

Restrictions on land sales markets can increase the costs associated with certain actions, but if the rewards from circumventing them are high enough, will not eliminate them. For example, owners who have no desire to farm tend to disregard the temporary prohibition of land

Box 3.3 Dangers of land privatization in an environment with multiple market imperfections

IN SOME CIS COUNTRIES, MANAGERS OF FARM enterprises took advantage of the rural population's complete lack of asset management experience to entice the new shareholders to sell their land shares. In this way, large segments of the rural population turned over their main asset, and land was concentrated in the hands of a small number of farm bosses. In Kazakhstan the government could probably have avoided

this negative effect by temporarily restricting the buying and selling of land and instead limiting transferability to short-term, or perhaps medium-term, lease transactions. Such an approach to the transferability of land would allow rural people to postpone irrevocable decisions to a later stage, when the economic situation has normalized and individuals have become more cognizant of the implications of land transactions.

Source: Csaki, Feder, and Lerman (2002).

sales in Nicaragua and circumvent it by long-term rentals with the promise to sell, which because of the associated insecurity leads to much lower land prices (Strasma 2000).

A number of countries have combined initial privatization of land with a moratorium on land sales to prevent the possibility that, after decades of collectivism, new landowners' exposure to land sales markets may cause them to dispose of their assets without being aware of their true value, leading to negative social consequences and concentration of land in the hands of speculators. The example of some CIS countries suggests that such concerns may not be completely unfounded (see box 3.3). Moratoriums may be justified as a way of allowing new landowners to acquire better knowledge of their assets and prevent quick sell-offs at unrealistic prices in an environment where markets work imperfectly.¹¹ In Albania this restriction has been combined with a right of first refusal, whereby before consummating a land sale to an outsider, neighbors or village members must be given the opportunity to acquire the land at the same price for some period. This has few adverse consequences and can help allay communities' fears of being bought out by outsiders.

General imposition of restrictions on the transferability of land by sale is unlikely to be enforceable or beneficial. In many situations such restrictions will have little impact in practice because of the absence of land or credit markets. Where appropriate institutions for intragroup decisionmaking are available (Libecap 1986), permitting the community to limit sales and giving it the right to decide whether to eventually allow sales to outsiders may be an acceptable compromise between

equity and efficiency concerns (Barrows and Roth 1990). Restrictions on the marketability of land are common in many developing countries, and many customary or communal systems prohibit the sale of land to outsiders. Some countries, such as Bolivia, have a minimum holding size that cannot be mortgaged or alienated. While these regulations impose some losses in terms of foregone credit market access, they can also help to reduce undesirable social externalities from driving some people into destitution (Andolfatto 2002). As long as they are the product of a conscious choice by the group and the group has clear and transparent mechanisms for changing the land tenure regime, they are unlikely to be harmful. As traditional social ties loosen or the efficiency loss from the sales restriction becomes too high, groups are likely to allow sales to outsiders in some form. The recent constitutional reform of the land rights system in Mexico allows for free sales and rental within all *ejidos* and for decisionmaking by majority vote on whether to eliminate the restriction on sales to outsiders. An initial evaluation of the reforms suggests that with appropriate technical assistance communities are clearly able to make such decisions (World Bank 2002a).

Land Ownership Ceilings

Low land ownership ceilings have been ineffective in facilitating the breakup of large farms and can significantly reduce investment

Countries have often imposed land ownership ceilings to facilitate the breakup of large farms and the associated sales of land to small producers or to prevent socially destabilizing accumulation of land. Even where such measures had a strong economic and social justification and where conditions for implementing them were favorable, ownership ceilings had only a marginal impact on land redistribution. For example, in West Bengal, where tenancy reform was implemented with considerable success, Appu (1997) estimates that only 6 percent of above-ceiling lands were redistributed to the poor. Observers agree that the main reasons for such failure were political, including an inability (or unwillingness) to act quickly, which facilitated spurious subdivision of holdings on paper by landlords, and exceptions for high-value crops, such as sugar or bananas, which generates considerable latitude for arbitrariness and corruption. Since the imposition of ceiling laws in most Asian countries, population growth and subdivision of land through bequest have further reduced the ability to use land ceilings as a means of making land available to the market.

In some countries, for example, the Philippines, existing land ownership ceilings restrict the functioning of land markets. As these apply to natural persons as well as to financial institutions, this not only elim-

inates banks' incentive to foreclose on properties that have been mortgaged for irrecoverable debts, but also reduces the ability to use land as collateral for existing loans, and may therefore contribute significantly to the low level of rural investment observed in this country (Deininger, Maertens, and others 2002). Application of ownership ceilings to plantation crops has been linked to reduced investment and employment generation by landowners who were above the ceiling, as well as by new investors who were able to get access to the land they required only through long-term leases from a large number of smallholders (Hayami and Kikuchi 2000). Similar restrictions on land are present in Sri Lanka, and observers claim that they have reduced land values by 50 percent, thereby significantly reducing the value of the asset endowment of the poor (Abt Associates 1999). Even where ceilings might have been effective when they were imposed, subdivision of land in the interim, either as a consequence of population growth and inheritance or to evade the ceilings, has greatly reduced their potential effectiveness. In addition, given the significant cost of implementation, land taxation may be a mechanism to improve the utilization of land or make land available to the market in a less costly and distortive manner.

Some studies attribute a role to land ceilings in preventing new, large consolidations after land reform (Cain 1981; Mahmood 1990), for example, in Japan and Korea. Even though ceiling legislation is unlikely to have been the only factor, this argument seems to have some merit, and ceilings above, say, 1,000 hectares, that are clearly aimed at discouraging speculation following land reform or farm restructuring may be justifiable if the issues related to enforcement can be tackled.

Land Price and Ownership Limits

To avoid the exploitation of landowners with limited information, a number of countries fix minimum and maximum prices for land. For example, some Eastern European countries have established "normative" prices for land that were either to guide activity in land sales markets or to specify a legally binding price range. While guidance on land prices, preferably differentiated by region and some broad land use classes, can be useful to provide information to market participants, a binding price range is unlikely to be effective, and in practice has been widely neglected, especially as normative prices were often set at unrealistic levels. While it is doubtful that such legislation has prevented land sales with prices above the ceiling, it is likely to have reduced the

High ceilings may help to limit speculative land concentration

Land price ceilings are unlikely to be effective

**Land ownership by
foreigners is often highly
charged politically**

price received by those transacting. A government role in disseminating information on land prices can be justified as a public good to increase transparency in the market. However, establishing a set price, especially if it is independent of quality characteristics, is neither justifiable nor easy to implement, and many countries seem to have been abandoned it as impractical (Csaki, Valdes, and Fock 1998).

Many countries, including industrial nations, either prohibit foreigners from owning land (for example, Bulgaria, Indonesia, the Philippines, Romania, Switzerland, and Tanzania) or only permit such land ownership under strict conditions (Hodgson, Cullinan, and Campbell 1999). Even in developing countries, where because of shallow domestic capital markets the benefits from abandoning such legislation could be considerable, the issue is often politically charged and trying to eliminate such restrictions could result in a divisive political debate that distracts attention from more urgent issues. Where this is the case, long-term leases that are open to foreigners may be a more practical and preferable option. Restrictions that limit the right to own land to physical persons out of fear of promoting a concentration of land in the hands of anonymous corporations, as adopted in a number of Eastern European countries such as Estonia, Lithuania, and Moldova, have in practice proven to be more harmful by limiting incentives for legal entities to invest in land improvement. Some of these countries have now abandoned the restrictions following the realization that corporate forms of land ownership, especially joint ventures, can provide much needed access to capital.

Land Consolidation and Minimum Farm Size Restrictions

**Land fragmentation can
result from inheritance
or land redistribution**

Fragmentation of agricultural land has two main sources. One, which has been of great historical relevance, is the successive division of small farms into smaller and smaller plots through inheritance in a situation where nonagricultural employment was limited. Over long periods of time, social norms that either require equal division of land among all heirs or the undivided passage of the family's land to only one of them have had a significant impact on the rural landscape in many European countries (Platteau and Baland 2001). A second source of fragmentation is the type of land redistribution policy adopted in the course of de-collectivization and farm restructuring. In many instances, providing new landowners with a large number of plots of different quality was politically more appealing than facing the tradeoffs associated with giving larger parcels with relatively homogenous soil quality (Tran 1998).

This implies that in those CIS countries that privatized and distributed land, but also in China and Vietnam, individual households can hold a large number of land parcels, often in odd shapes, something that has often been claimed to be detrimental to efficient cultivation.

Another instrument that governments have used to improve the structure of agricultural landholdings or to prevent further fragmentation has been the imposition of minimum farm size limits or restrictions on subdivision. Similar to what was observed in the case of maximum farm size limits, where economic conditions often prompted households to act in a certain manner irrespective of government regulations, such restrictions have rarely prevented undesirable outcomes entirely, but by making them illegal have forced households into informality. For example, Mexico prohibits subdivision upon inheritance to prevent fragmentation, but this provision is widely neglected in practice. Rather than helping to improve the agrarian structure, this provision clogs up the judicial system: about half the conflicts before the agrarian courts involve inheritance disputes (World Bank 2002a). Minimum farm size legislation was similarly ineffective in Morocco, and led to many disputes. In Brazil, Graziano da Silva (2001) identified minimum farm size legislation as a factor impeding the growth of the non-agricultural economy by making the pursuit of part-time farming economically less rewarding. In all these cases, creating the conditions for rental and sales markets to function better seems to be preferable.

Excessive fragmentation of agricultural parcels can harm agricultural productivity in a number of ways. It increases the amount of land needed for paths and roads; adds to the time needed to get to plots; requires additional spending on fencing and boundary demarcation; increases the difficulties of management, supervision, and pest control; and makes investments in irrigation, drainage, and soil conservation, as well as the use of certain machinery, more difficult. However, farmers may seek some fragmentation of plots to diversify crop locations and manage risks, overcome seasonal labor bottlenecks, and match soil types with crops to overcome inefficiencies in land, labor, credit, and food markets (Blarel and others 1992; Fenoaltea 1976; McCloskey 1975). To decide whether concern about such fragmentation is warranted, an understanding of the causes underlying this phenomenon, the magnitude of the losses it may impose, and the availability of policy options that could deal with the problem at a reasonable cost is necessary. With the emergence of a dynamic nonfarm economy, mechanized farming becomes desirable and the losses from fragmentation may assume greater relevance. Experience

Minimum farm size limits or subdivision restrictions are ineffective in preventing fragmentation

The disadvantages of fragmentation increase with the level of mechanization

in industrial countries shows that fragmentation becomes a serious constraint requiring intervention once it impedes the ability to use machinery on a large scale in areas with a rapidly decreasing agricultural population (Bentley 1987). In France, for example, Simons (1987) finds returns of up to 40 percent for consolidation.

Empirical evidence suggests that the costs of fragmentation are relatively modest in unmechanized, semisubsistence agriculture, where rental markets can often be relied on to bring about a structure of operational holdings that is more in line with economic needs. For example, Heston and Kumar (1983) suggest that in Asia, instances where fragmentation had historically involved high losses in output are rare, a conclusion that is supported by more recent evidence from Pakistan, where benefits from consolidation are considered to be small (Ali, Parikh, and Shah 1996). To date the quantitative evidence from studies exploring the productivity impact of fragmentation in China is not particularly positive, even though levels of fragmentation are extremely high, with average farm sizes below one hectare split, on average, into nine plots (Wenfang and Makeham 1992). To consolidate land, in 1988 the city of Pingdu in Shandong province adopted the “two-field system,” which consolidated parcels that were then auctioned off among farmers. Analysis suggests that the program reached some of its goals: the average number of plots held by participants decreased from 7.6 to 3.4 and their technical efficiency was 6.7 percent higher than that of nonparticipants (Chen and Brown 2001). Nevertheless, a poor record of implementation led to conflict and resistance, and in 1998 to the abandonment of the program. Households prefer to be able to rent out land on an individual basis and, in doing so, also seem to be able to capture most of the effects that were hoped for from a more centralized form of consolidation (Lin, Cai, and Li 1997). Other studies from China, which show that consolidation could lead to output gains of up to 15 percent, also recommend relying on voluntary and decentralized market processes rather than on administrative solutions (Wan and Cheng 2001).

Numerous countries have used the fact that the cost of negotiation may be too high for individuals to bear voluntarily as a justification for one-time interventions that combine inducements and restrictions to bring about consolidation of operational holdings. Such programs can be justified only in situations where, once consolidated, holdings are unlikely to be fragmented once again, a condition that is normally satisfied only at higher income levels or if fragmentation was the outcome of an involuntary process. The fact that consolidation programs often

**Market-based solutions
should be exploited before
embarking on specific
consolidation programs**

incorporate development of rural infrastructure in an effort to improve conditions for nonagricultural employment in rural areas has often added to their complexity and costs, as well as the time taken to complete such actions. In considering interventions to promote consolidation, an important initial step is to ensure that the opportunity for decentralized options to achieve consolidation of operational holdings through unconstrained rental and sales markets has been exhausted, and that the institutional infrastructure to implement interventions in a transparent fashion is available. Most developing countries have not yet met these conditions (Giovarelli 2002).¹² Even in some Eastern European countries where, because of the mechanisms adopted to redistribute land, the benefits from consolidating operational holdings could indeed be high, the economic viability of consolidation programs remains to be demonstrated, and careful evaluation of ongoing experiences would be highly desirable and would be needed before more widespread adoption of specific approaches can be recommended.

Conclusion

THE METHODOLOGICAL DISCUSSION DEMONSTRATES THAT for a number of reasons, land markets cannot be viewed independently from the broader social, institutional, and economic framework. Subsidies will be capitalized in land values, therefore economic distortions will affect households' propensity to acquire land. In addition, imperfections in other markets will have differential impacts on specific types of households and therefore affect land market outcomes. Furthermore, institutional factors that affect the costs associated with land market transactions are a key determinant of the level of land market activity and its capacity to enhance equity. Neglect of institutional issues by policymakers forces participants to adopt informal arrangements and generally provides advantages to those with greater endowments and better access to information, and may not be advantageous to the poor. A differentiated approach to land market policy that is aware of the trade-offs and the opportunities as well as the limitations of government policies is therefore most likely to be appropriate.

In the past policymakers have often underestimated the potential for land rentals to contribute to greater productivity and increase the welfare of the poor. Evidence suggests that land rentals can provide access to land in a low-cost fashion as a response to exogenous shocks, off-farm employment,

and changing opportunities and interests, or even in situations where the final ownership status of land is still being clarified. The extent and direction of rental market activity, and by implication its impact on productivity and equity, will be affected by the functioning of other markets, the outside opportunities available to potential tenants, and the security of property rights. Imperfections and distortions in other markets, as well as wealth constraints, will affect the impact of land rental on productivity, but in most situations rental markets, including sharecropping arrangements, improve the allocation of land and enhance equity. Where property rights are not secure or are perceived to be insecure, landowners will not be willing to rent out under longer-term contracts, even though such contracts may be desirable to facilitate structural change and the associated investment decisions. Finally, the impact of rental markets on equity will depend on how the surplus is shared between landlords and tenants, something that depends on the alternative opportunities open to the latter. Even though the transaction costs associated with land rentals are normally lower than those in sales markets, making information on land ownership, contractual forms, and prices more widely available offers opportunities to reduce them.

Scope for land rentals is often underestimated, and the potential difficulties associated with land sales often have been neglected

While permanent land transfers normally provide higher incentives for long-term investment, land sales markets are normally associated with higher transaction costs than land rental markets. In addition, acquiring land through purchase requires a considerable outlay of cash, which may be out of reach for households that do not have access to nonagricultural income, especially where long-term mortgage credit for land acquisition is unavailable. In situations where markets for credit and insurance are imperfect, the supply of land in the sales market may be mainly through distress sales. Distortions that favor larger farmers, as well as the tendency of land prices to exceed the capitalized value of agricultural incomes from land, imply that even in situations where small farmers have a strong productive advantage, the contribution of land sales markets to bringing about a farm size distribution that is more efficient and more equitable may be limited.

Restrictions on land sales market continue to be widespread, though difficult to implement

Governments worldwide have adopted a large array of discretionary measures in relation to land sales, even though in principle economic incentives, for instance, through land taxation, are likely to be much preferable to rigid regulations.¹³ These measures have rarely achieved their desired impacts, suggesting that even where a case for restrictions or other types of government interventions may exist, any judgment on their merit has to include an assessment of implementation capacity. In

many cases where centralized restrictions on land sales markets may be justified, enforcement difficulties have generated distortions whose impact was worse than that the restrictions had set out to remedy. With the possible exception of loosely defined restrictions on maximum farm sizes, universal limitations on sales markets are therefore unlikely to be effective, but may lead to the emergence of large bureaucracies that develop a self-interest in maintaining these restrictions. Given these difficulties, and the large variations in conditions in any given country, a more decentralized approach may be preferable. Indeed, cohesive communities have often imposed restrictions on the transferability of land to outsiders at certain stages of their development out of a concern to maintain social harmony and prevent landlessness. Policy should ensure that the mechanisms for reaching such a transition are transparent and representative, and that changes in such rules are feasible when they no longer serve the interests of the majority of community members.

A final conclusion from the evidence presented is that it is unrealistic to assume that restrictions on the functioning of markets will lead to significant and quick redistribution of land and other productive assets to the poor. Where a strong social, political, and economic case for such redistribution exists, other mechanisms will need to be adopted. There is considerable potential for such mechanisms to draw on market outcomes in more imaginative ways than in the past, for example, to facilitate targeting and the acquisition of managerial experience by potential beneficiaries. Relying on markets alone will, however, not be sufficient.

Land markets will not equalize a highly skewed land ownership distribution

Notes

1. Empirical evidence confirms that family labor is more productive than hired labor and that the intensity of supervision by family members affects the performance of hired labor (Frisvold 1994).

2. A similar argument about the excess value of land access could be applied to any household that had an abundance of another imperfectly traded factor, such as farming skill.

3. However, the supervision advantages of owner-operators have, in many cases, motivated large processors to contract production out to smallholders under outgrower or contract farming schemes that often pro-

vide credit in kind as well as technical assistance (Glover 1990).

4. The traditional interpretation that these interlinkages are devices landlords use to bring the second-best outcome closer to the first-best outcome by increasing tenants' supply of effort (Braverman and Stiglitz 1982) requires strong assumptions that are generally not satisfied in developing countries (Otsuka, Chuma, and Hayami 1992).

5. If risk were a major factor in choosing the optimal type of contract, one would observe significant variation in crop shares according to the riskiness of the

crops grown on particular plots. This has not been observed empirically, however.

6. Rural land sales are relatively few, even in industrial countries. The percentage of farmland transferred, on average, each year is 3 percent of the total in the United States, 1.5 percent in the formal sector in South Africa, 1 to 1.5 percent in the United Kingdom, and 0.5 percent in Ireland and Kenya (Moll 1988). The literature highlights the difficulty of land acquisition through borrowing by would-be smallholders despite their productivity advantage (Binswanger and Elgin 1988; Carter and Mesbah 1993). At the same time, even in developing countries urban land markets can have much higher levels of transactions (Brits, Grant, and Burns 2002).

7. This is often facilitated by regulations that limit the amount of rent to be paid or specify a minimum lease period.

8. Some countries adopt minimum lease terms to facilitate the stability of land sizes, for example, nine years in France, while others impose maximum lease terms to discourage land re-concentration, for example, three years in Vietnam.

9. Activity varies considerably across regions. Annual turnover of land amounts to as much as 12 percent in recently colonized areas, but is about 2.5 to 3 percent for private lands and only 1.5 to 2 percent for lands that had been subject to agrarian reform (Delahaye 2001).

10. The literature includes considerable discussion of urban rent ceilings, which are widespread in rural

areas not only in South Asia and Southeast Asia (Malpezzi, Chun, and Green 1998). In Eastern Europe, similar legislation often limits the rent that can be charged to the land tax that has to be paid to the government, a measure that would tend to undermine the functioning of rental markets. Note that in Western Europe tenure legislation has historically been imposed to advance equity goals; however, even in this case, preventing over-regulation has been difficult (Ravenscroft, Gibbard, and Markwell 1998).

11. The experience of the mass privatizations supports this argument. Many recipients of mass privatization vouchers in Russia in the early 1990s rushed to sell them to speculators and professional investors. They did not recognize the long-term value of the new asset and precipitously converted it into something familiar—cash. These early voucher sellers understood the implication of their irrevocable decision only much later, when gradual normalization had led to steep increases in the value of the privatized companies' stock, which they could have owned had they only avoided selling the vouchers.

12. In many instances consolidation programs have been linked to infrastructure or other projects to provide public goods to rural areas. Providing these benefits independently from measures aiming at simultaneous land consolidation may often be more feasible and much simpler.

13. While part of this can be explained by problems with implementing land taxes, it may also be related to the fact that direct interventions offer greater options for bureaucratic discretion.