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DESIGNING LAND POLICIES: AN OVERVIEW

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Little economic activity would occur in the absence of rights, or powers, to consume, obtain income from, and transfer assets. The level of economic development of a region will therefore depend on its system of property rights.¹ The chapters in this Part bear on two central questions of the influence on development of property rights in land:

- Under what conditions will government intervention in customary or extra-legal land rights systems promote development (examined in [12],[13], and [14])?
- What has been the experience of redistributive land reforms? Pitfalls in the Philippine and Colombian land reforms are explored in [15] and [16].

Water rights systems are discussed in [25] in Part IV.

Land Rights Systems

In LDCs, official land records in the rural area are typically incomplete or absent. In addition, there are often conflicts between national systems of land rights, *de facto* rights of occupancy exercised by squatters, and customary land rights established by ethnic communities. In much of Sub-Saharan Africa, rural land markets are fragmented or do not exist at all as a result of restrictions under customary law on

¹ For a lively analysis of the modern view of property rights as a web of relations of entitlement between persons (rather than as the exclusive control over something), see Grey 1980. The usefulness of that view is illustrated in the African case study by Migot-Adholla *et al.* [14].

transferability of rural land rights.

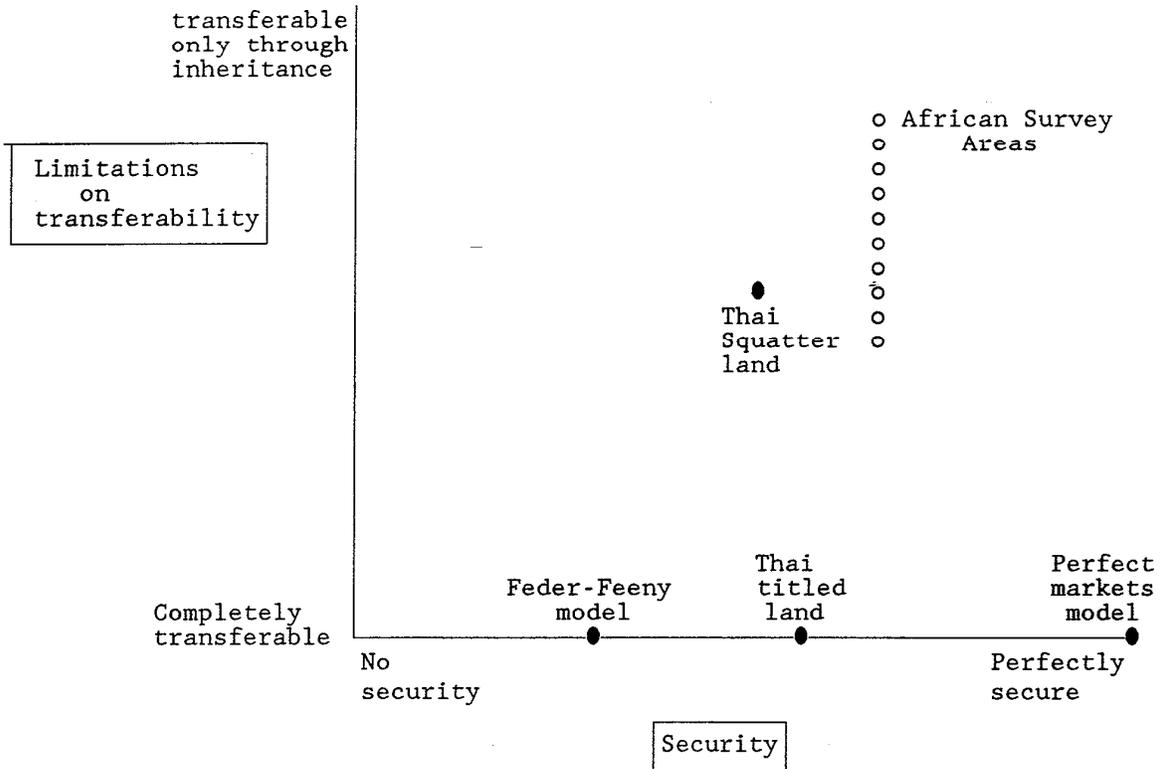
It has been widely assumed that government reform of rural land rights systems is needed in many LDCs to increase the security of property rights and the scope of land markets. Robert Seidman, a leading scholar in law and development, argued that, "Undoubtedly, the hardest single rub in African law lies between the norms of customary land tenure and the demands for development" (Burg 1977, p. 525.) Policy makers appear to have accepted this view in many cases. African countries that have invested in rural land titling programs include Kenya, Somalia, Uganda, and Zimbabwe (a brief survey is in Barrows and Roth, 1990). To increase security of land rights, many other countries -- including Thailand, Indonesia, Yemen, and Brazil -- have undertaken costly projects to improve land records.

The high cost and uncertain success of these investments have recently prompted economists to study the economic effects of land titling programs and of indigenous African land rights systems. The first three chapters examine these issues. The main conclusions in each chapter differ, however, because each focuses on a different environment, as described below and illustrated in Figure 1. Taken together, these three chapters suggest the circumstances in which a government investment in land information systems, registration, and titling is likely to promote development, and those in which it is not.

Figure 1 will be helpful in synthesizing the contributions of the next three chapters. The figure characterizes land rights systems according to two dimensions: transferability of rights and security of rights. These two dimensions are distinct. In the case study by Migot Adholla et al. of African indigenous land rights systems, use rights are quite secure but cannot, in many cases, be freely transferred. Data were collected on whether a head of household could exercise numerous use rights over particular parcels of land. For permanently held land, the right to transfer use rights was, in many cases, limited by the requirement (i) to obtain prior approval, (ii) to limit the transfer to short duration, or (iii) to make transfers only to someone within the family or lineage. The unrestricted right to transfer a use right is just one end of a continuous spectrum between communal control and a free market.

Tenure security is a second, independent dimension of land rights. Insecurity of rights can arise under a regime of limited transferability of rights when the local community's authority is weak, or it can arise under a regime of marketable rights because of absent or conflicting land records and inadequate enforcement. In the idealized market systems assumed in much of neoclassical economics, all land rights are marketable and security of land rights is perfect, as illustrated by the southeast point in the figure.

FIGURE 1



The land rights systems considered in [12], [13], and [14] are indicated as points in the space of Figure 1. Feder and Feeny [12] explore, in a theoretical model, the consequences of insecurity of land rights (which are assumed to be perfectly transferable). They suppose that landowners live two periods, consuming as well as investing in land and capital in the first period, and hoping to enjoy the fruits of the land in the second period. But they face a chance, with probability ϕ , of losing their land and the output on it at the beginning of the second period. The expected value of their final wealth is $[1 - \phi]$ times the value of the land and its output at the end of the first period. *Tenure insecurity is similar to a tax at rate ϕ .*² Just as the burden of a tax consists of the resources paid plus an efficiency cost, the effect of tenure insecurity consists partly in the transfer to individuals who stand to receive the land (with probability ϕ), and partly in an efficiency cost.

The contribution of the Feder-Feeny model is to identify three sources of the efficiency cost of insecurity of land rights. One obvious source is the distortion in farmers' incentives to invest in land. A second source arises if land is used as collateral for debts. In this case, part of the risk of land loss is borne by the lender, and thus insecurity of land

²For an elegant demonstration of this point in the context of urban residential land, see Malik and Schwab (1991). If individuals are risk averse, then land insecurity differs from a tax to the extent that the holders of contingent claims to the land value risk differently--see their discussion on p. 305.

rights will reduce farmers' access to capital. The third efficiency cost arises because uncertainty in rural land rights depresses the price of capital much less (if at all) than the price of rural land, under the plausible assumption that rural land but not capital is in inelastic supply. The increase in the relative capital-land price ratio will, through the usual substitution effect, reduce the capital intensity of farming.

The implication of the theoretical model is clear. To the extent that government measures, such as titling, increase the security of property rights in land, they are likely to have important effects on the efficiency of resource allocation in the rural sector.

The following chapter, Feder [13], is a cross-sectional study of two classes of farms in Thailand -- squatter land in illegally occupied forest reserves and titled land. Past government inaction in most illegally occupied areas, and squatters' own perceptions of the security of their land, suggest that the rights of the squatters in the surveyed areas are reasonably secure. Those rights are also highly transferable in the informal land market. However, they are not at all transferable through formal channels, with the practical consequence that squatters cannot use their land as collateral to obtain loans from banks. The two categories of land, squatter and titled land, are therefore represented in Figure 1 as

differing primarily with respect to the transferability of rights. Data for 1984-86 suggest that in Thai areas where (because of a high degree of commercialization) informal sources of credit were abundant, the possession of legal title had little effect on investment in the land or on output. In contrast, in areas where bank lending was an important source of credit, land titling had a strong positive effect on investment in land, output per unit land, and the market value of land. As Feder notes,

The results are strengthened by the findings elsewhere (Chalamwong and Feder 1988) that awarding title documents to squatters has a very high economic payoff in most of the areas studied: the benefits outweigh the cost of surveying, adjudicating and certifying ownership by a wide margin.

Finally, Migot-Adholla et al. [14] use cross-section evidence from Ghana, Rwanda, and Kenya in 1987-88 to examine whether restrictions on the transferability of land are a constraint on productivity. Their survey covered 10 regions of rainfed agriculture. In the 10 survey areas,

The distinguishing feature of different tenure regimes . . . revolve[s] around restrictions on the individual holder's ability to transfer land (only among family members, within the lineage or community, or to outsiders; and with or without approval from other lineage or community members), which also tends to coincide with the model of transmittal (inheritance, gifts or bequest, and sale).

The African survey areas are indicated by the open circles in Figure 1.

Surprisingly, the evidence indicates no relationship between cross-sectional variations in land rights and productivity.

Comparison of land rights regimes across areas with different levels of commercialization and population pressures provides (weak) evidence in support of the longstanding hypothesis that Sub-Saharan customary land rights systems do move autonomously toward full privatization in the presence of increasing commercialization and population pressure. The authors conclude that the binding constraints on Sub-Saharan rural development are not customary land rights systems, but lie elsewhere -- e.g. in poor rural health, education, infrastructure, technology, and output markets. They argue that government measures to promote the effectiveness of existing indigenous land tenure institutions are preferable to expensive formal registration and titling programs.

This conclusion is strengthened by their results that in traditional farming areas in Kenya, land titling programs have had little impact. They collected data from the cultivators of more than 100 land parcels in each of two traditional Kenyan farming areas. In one area, 75 percent of the parcels were titled but only 8 percent were deemed saleable by the operator. In the second area, only 14 percent were titled but 67 percent were deemed saleable. Kenya provides the best test case for land titling programs in Sub-Saharan Africa because it is the country in that region with more than thirty years' experience with a national land registration program. Its experience demonstrates that titling is neither sufficient nor necessary to create a land

market. Rather, land titles facilitate the expansion of a land market where social norms permit the alienability of land.

Taken together, the chapters discussed above suggest that the benefits of land registration and titling programs are likely to be highest in areas where (a) land markets are active, but there is a high incidence of conflict over ownership of marketable rights, or (b) farmers' access to credit depends on having title to land. The benefits are likely to be small or negligible in areas where indigenous land rights systems are strong. In such areas, government programs to promote land markets and strengthen formal land claims may even decrease land rights security if indigenous law is undermined, but official law is not widely enough recognized or well enough enforced to supplant it.

Land Reforms

Many studies indicate an inverse relation between farm size and productivity (see Berry and Cline (1979) and Carter (1984)). Consider the following data based on a survey across India in the early 1970s:

Size group (acres)	Average farm size (acres)	Income per acre (Rupees)
0-5	2.95	737
5-15	9.3	607
15-25	19.5	482
Over 25	42.6	346

Source: Berry and Cline, Table A-1, p. 149.

The data show a dramatic decline in income per acre as farm size increases, with productivity of the largest size category less than half that of the smallest. Many factors, including differences in land quality, contribute to the widely observed inverse relation between farm size and productivity. In a careful statistical analysis of another set of data from India for 1969-1972, Carter (1984) found that differences in land quality and capital could not explain a significant part of the inverse relation. Though the inverse relation between farm size and productivity which is due to farm size alone is not as dramatic as Table 1 would suggest, nonetheless a decisive factor in the widely observed inverse relation is that smaller farms tend to be family farms using labor very intensively and making little use of hired labor; while larger farms use labor less intensively and rely primarily on hired labor. Because of agency costs, monitoring problems, and imperfections in labor markets, family-run farms face a low implicit price of labor, while large farms using hired labor face a high implicit price of labor. Hence, it makes an important difference whether the laboring family owns the land, or the landowner hires the labor.

Redistributive land reforms have been carried out in a number of countries, often as part of social revolution, but sometimes as a deliberate policy intervention to capture the efficiency benefits of the family farm, reduce urban food prices, and decrease poverty (for a brief overview, see Bell 1990, pp.

150-154). The two case studies on deliberate land reform policies in the Philippines [16] and Colombia [17] illustrate what can go wrong when land reform policies induce unforeseen changes in institutions.

The 1972 land-to-the-tiller program in the Philippines converted share tenant into leaseholders or owners. The land rent or amortization payment was fixed at 25 percent of annual rice yields, averaged over three normal years preceding the year in which the program went into effect. In an effort to ensure that the land reform beneficiaries remained the tillers of the land, legislation denied land reform beneficiaries the right to lease (or sublease) their land.

Since 1972, public investment in irrigation in central Luzon and the diffusion of Green Revolution technology more than doubled paddy yields and made many of the beneficiaries of the land reform wealthy. With increasing wealth came a decline in the amount of farm labor that beneficiaries wanted to supply. Before the land reform, the usual practice by landowners who did not wish to farm was to lease their land for a fixed rent or a share rent. Since the land reform, this kind of contract has become very risky and rare, because a tenant who can prove to the satisfaction of Agrarian Reform Office that he is the responsible "tiller of the land" is entitled to receive the land rights of the original land reform beneficiary. Hayami and Otsuka [16] provide evidence that tenancy contracts have been supplanted by a

new form of (semi-) permanent labor contract, the so-called kasugpong, who are paid either a wage or a 10 percent share of paddy output. Relative to the tenancy contracts used before the land reform, the kasugpong contract attenuates the worker's incentives to produce and thereby aggravates the agency problems that the land reform was intended to solve. It also has given rise to a new landless labor class which has less opportunity for upward mobility than did the pre-1972 sharecroppers whom they replaced.

Another example in which restrictions on land titles were counter-productive is the gogolan land system found in parts of East Java, Indonesia.³ The Dutch established land titles to irrigated riceland there in the 19th century, and provided that these gogol could be transferred only as units; they cannot be subdivided. In practice they are subdivided and possession rights are sold, but without legal title. Thus, although the land is legally titled, the way in which it has been subdivided has deprived the possessors of the benefits of legal title.

The last case study in this Part is an analysis of 60 years' history of land reform policies in Colombia (de Janvry and Sadoulet [16]). This study places the system of land rights squarely within the broader political system. Colombia has periodically sought, beginning in the 1930s, to modernize its

³I owe this example to an anonymous referee.

agricultural sector through redistributive land reform. However, instead of land redistribution, there has been a series of reforms that have (inefficiently) increased output on large farms at the cost of large public subsidies to wealthy farmers and explosive poverty among the smallest landholders and the landless.

At least until the writings of the school of public choice in economics, economists tended to argue that if a Pareto-improving action was available to a representative government, then it would ultimately be implemented. But recent work has shown how redistributive activity, in the form of competitive seeking of government largess, can lead to prisoners' dilemma games and Pareto inferior outcomes. Rent-seeking behavior allows private groups to turn laws into private goods that reduce the income-producing capacity of an economy (e.g. as when activities expended to obtain a government-created monopoly use up productive resources). As Brock and Magee (1984) put it, the *invisible hand* is stamped on by an *invisible foot*. The foot represents the unseen costs that rent-seeking activity imposes on an economy.

de Janvry and Sadoulet argue in their case history of Colombian land reform that early land policies increased the political influence of the large landlords over the making of agricultural policy. They used this influence to divert capital,

marketing programs, and other inputs to large-scale farms, often with big subsidies. These government subsidies increased the value (to the large farmers) of their land and ultimately rendered a redistributive land reform with compensation infeasible. As a result, Colombia has been unable to capture the efficiency gains potentially offered by a redistributive land reform. de Janvry and Sadoulet suggest that a redistributive land reform might again become feasible if a period of fiscal stringency forced a closing down of government subsidies to large farms.

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