10

Land Titling: Good, Bad, or Unimportant?*

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INTRODUCTION

The importance of land tenure reform to rural development in Sub-Saharan Africa has been a matter of debate for decades. Many have argued that individual property rights spur growth through increased credit resources, higher security of investment, and the increase in land area controlled by the most efficient farmers (World Bank 1989, Swynnerton 1954). The colonial government in Kenya, after years of reluctance, was eventually persuaded by these arguments, believing that the development of a prosperous class of farm owner-operators would lead to political stability (Swynnerton 1954, Sorrenson 1967). The long process of land registration in the entire country began in 1956 under the colonial government and continues to this day under the independent government.[1]

The same process that leads to the concentration of land in the hands of more efficient farmers, however, could lead to landlessness and poverty for large segments of the population. The first African government of what became Tanzania believed that these equity concerns were more important than the efficiency considerations, and abolished private land titles shortly after assuming power. All land became state property, with the purchase, sale, and rental of land

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[1] "Land registration" is the term used in Kenya for the assignment of land titles to individuals and the recording of those titles in the public registry.

forbidden. Therefore, Tanzania and Kenya have pursued extremes in land policy, as in so many other areas.

This long-standing debate has taken several interesting twists in recent years. Feder and others (1988) in an award-winning study present theoretical and empirical evidence from Thailand regarding the importance of land titling to investment in land. Recent surveys and cross-sectional studies from Africa, such as Atwood (1990) and Migot-Adholla and others (1991), have found little or no impact of titling on investment.[2] That titling leads to land concentration is often assumed, but "reliable statistics showing changes through time are still missing" (Shipton 1988).

This study examines the history of land ownership in two similar communities, one in Kenya and one in Tanzania, in order to fill the literature gap regarding changes through time under completely different legal tenure arrangements. Our results strongly suggest that land titling did *not* lead to increased land inequality in our Kenyan community, and thus was not bad as hypothesized by the Tanzanians. In addition, this study complements the other recent literature from Africa in concluding that land titling has had little if any impact on investment or credit markets, and thus was not good as hypothesized by Swynnerton and others. Our conclusion is that except in unusual cases, land titling is unimportant for development; governments should invest scarce fiscal and managerial resources in others areas.

There are three prongs to the argument in favor of the granting of freehold title, under which complete usage rights and transferability are vested in the owner. The first two are concerned with the impact on investment of security of tenure. The farmer has a greater incentive to invest in land improvements the greater his certainty that the land will belong to him and his descendants in the future. If land is held communally, the incentive to invest is low. Second, titled land can be used as collateral to secure loans, thereby increasing the funds available for agricultural investments.

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[2] In an unpublished study, Mbwika (1991) finds a positive relationship between land titling and the percentage of the land planted in permanent crops in a cross-sectional regression using aerial survey data from western Kenya. The areas in which land titling has been completed, however, tend to be the high-potential zones. It is not clear that Mbwika successfully controls for agro-ecological zone in the regressions.

The third prong begins by arguing that more efficient farmers have a higher marginal return to land than less efficient farmers.[3] Therefore, assuming that the only value of land is its agricultural use and assuming that no other impediments to increasing scale exist, more efficient farmers should be able to buy out their less efficient neighbors in a transaction that is beneficial for both farmers and society as a whole. Over time, productivity in the agricultural sector will rise as a result of these transactions.[4] Such transactions are only possible when individuals have the right to both buy and sell land.

The counterargument holds that freehold tenure, whatever its impact on efficiency, leads to increased inequality with respect to both landholdings and income. Note that the counterargument is based on a difference in values rather than disagreeing about facts with the third prong of the argument in favor of freehold tenure. The argument thus moves beyond a discussion of land policy to the definition of development.[5]

In recent years, a number of authors have argued that casting the land tenure debate in Africa as one of equity versus efficiency is incorrect. They challenge the equity versus efficiency debate on three grounds:

First, indigenous land rights were rarely communal in areas of permanent cultivation. Individual households were usually allocated plots of land that remained theirs to cultivate as long as they wished; in addition, land was inheritable by sons. Thus, usage rights and transferability

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[3] This is only possible if the rural land market is in a state of disequilibrium, as one would suspect in rural Africa.

[4] It has been argued that such transactions have played an important role during the 20th century in the growth of productivity in U.S. agriculture. See Cochrane (1979) among many others. Although economies of scale have played an important role in this process in the U.S., it is not necessary to assume such economies in order to improve productivity through an active land market. Natural economies of scale are rare in African smallholder agriculture; to some extent Kenyan agricultural policy had a large farm bias for many years, thereby inducing some economies of scale. These biases were never important, however, for the area of Kenya we investigate because the largest farms are no more than 25 acres.

[5] One aspect of the counterargument is distinctly different from the argument in favor of individualization: Under indigenous tenure systems, numerous individuals had some usage rights to a piece of land, even if primary rights of agricultural production were vested in another individual. During the process of land titling, these usage rights are lost formally, usually without compensation. Since those with such rights tend to be females and poor males, questions of equity arise. Since our evidence begins at the time of independence, after the completion of registration, we do not examine this issue. See Mackenzie (1990) for evidence accumulated in an area close to our Kenyan study site.

rights to heirs were secure. Second, indigenous land rights have not been static (thus the use of "indigenous" to characterize these systems rather than "traditional" or "customary." See Bruce (1986).) Rather, as the advantages of individualized tenure have grown, tenure systems have evolved towards the granting of those rights (Cohen 1980). Although in most cases the right to sell land outside the lineage group is still restricted, all other rights are frequently allocated to individuals.[6] Since security of tenure is not suspect under such arrangements, there would be no increased security under freehold title and thus no direct impact on investment. The results of Migot-Adholla and others (1991), based on cross-sectional data collected in three African countries (including Kenya), are consistent with the hypothesis that indigenous tenure regimes evolve toward individualization, thereby making formal entitlement unnecessary to ensure security. Thus, if this challenge is correct, the first prong of the argument in favor of individual title would lose its force.

Others challenge the argument in favor of land titling for assuming that indigenous systems will disappear when the government introduces a new land tenure policy. It is possible that village elders could continue to control the allocation of land in their areas even after title deeds have been issued or the government has nationalized all land. Okoth-Ogendo (1976), Shipton (1988, 1992), Coldham (1979), and Moore (1986) present evidence that this has occurred in Kenya and Tanzania. Rights granted or withheld by the legal system may not be *de facto* rights. If the granting of legal freehold tenure does not provide the owner with complete transferability rights, neither the second nor the third prong of the argument in favor of freehold tenure would hold, since lenders would have difficulty disposing of collateral and more efficient farmers may not be able to buy out less efficient farmers.

If freehold tenure fulfills its promise, the arguments in favor of land titling lead to three hypotheses: When comparing villages in the two countries with similar agro-ecologies and culture, the Kenyan village should have more land-secured credit, a more active land market, and increasing inequality of land over time.

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[6] The term "lineage" refers to a group of persons with a common ancestor who continue to live in close contact with each other.

None of these hypotheses hold for our study sites. When comparing two communities, we find virtually no land-secured loans in *either* location and approximately equal amounts of land sales. Changes in land inequality among sampled households have been larger in Kenya, but the difference between the countries is not the result of purchases and sales of land. These results are broadly consistent with the theme that indigenous tenure systems continue to dominate centrally-imposed changes in land tenure long after the initial reforms.

THE SURVEY

Following the work of Cain (1981) and Walker and Ryan (1990) in South Asia, we asked our respondents to list all land transactions that they or their parents had engaged in since independence. The respondents had little difficulty recalling such transactions, given their importance and lack of frequency. Errors are more likely to arise in estimating areas; in Kenya, where all of the land had been surveyed in the years immediately preceding independence, area estimates tend to be fairly accurate; they are considerably less so in Tanzania. Within these data limitations, we are able to examine changes in the distribution of land among these families over time, as well as changes in the use of credit and markets for land, to see if the anticipated impacts of the policy differences occur.

. It is important to note that the Kenyan community was in the middle of the area most affected by the Mau-Mau uprising of the 1950's; the changes in the Kenyan land policies were directly related to the need of the colonial government to restore order in these communities. The land reform involved two separate processes that were carried out simultaneously but are conceptually distinct: land registration and land consolidation.[7] Policies toward coffee-growing changed at the same time as policies toward land, and for the same reasons. Africans had not been allowed to grow coffee in this area until the late fifties.

As noted in Chapter 3, the two communities are similar, although not identical, in climate and culture. If government land policy has a major impact on the development of communities,

the stark differences between Kenyan and Tanzanian land policy should produce different outcomes in these two villages.

EMPIRICAL EVIDENCE

Evidence is presented here to test the hypotheses stated above concerning the impact of Kenyan and Tanzanian government policies on availability of credit, investment, land market transactions, and changes in inequality over time. These topics are addressed in turn.

Credit

As expected, no households in Tanzania were recipients of land-secured loans. Some short-term credit is available through the coffee cooperative society, which provides inputs for coffee in kind seasonally, and through local, informal channels, but land is never used as collateral. This is consistent with both the indigenous land tenure system and Tanzanian law.

We had expected to find a substantial proportion of farmers in our Kenyan sample with land-secured loans. Only two out of 115 households, however, had an outstanding land-secured loan at any time during 1991, and the only farmer with a sizable loan received a letter in January 1992 threatening auction of his land.[8]

This result clearly distinguishes the Kenyan case from the large impact of titling on land-secured loans that Feder and others (1988) found in Thailand. The difference is to some extent explained by the types of areas being surveyed. Feder and others surveyed squatters on

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[7] Under consolidation, a farmer's fragmented holdings were exchanged for one holding equivalent in size. We do not discuss consolidation in this paper. See Blarel and others (1992) for a discussion and empirical analysis of the economics of fragmentation.

[8] The stories of these two cases are enlightening. The smaller of the two loans was orginally for about $600, and was used to furnish part of the purchase price of a commercial plot in a nearby trading center. Only $120 remains outstanding. In the case of the larger loan, the household head is a local official of the ruling political party, and has held this position for almost 20 years. In the early eighties he borrowed an exorbitant amount of money for a small farmer from a commercial bank, about $11,000, to buy a pickup to use for rural public transportation (a *matatu*). The pickup was wrecked shortly thereafter and the insurance company took two years to reimburse him, during which time he could not make payments on the loan. Subsequently, he refinanced the loan through a government parastatal in charge of agricultural sector loans, using his land as security and selling several acres in order to put up the required cash. The government parastatal required evidence of the salary income of his sons prior to granting him the loan. When his sons lost their salaried jobs and the price of coffee fell in 1989, he failed once again to make payments. He has received a great deal of criticism from his immediate family and relatives. He has appealed to the president

government land who had been granted title to that land. No indigenous system of land tenure was in existence in these areas prior to their settlement, nor did the land possess value for the community over and above its agricultural profitability. Land can be used successfully as collateral in such circumstances. In addition, Thailand is one of the very few countries in the world in which a government parastatal successfully lends to small farmers. Thus, in Thailand, there was apparently both a demand for and supply of land-secured credit to rural households with title.

In the Kenyan case, it is not clear whether the absence of land-secured credit is solely the result of a lack of supply, or is also demand-driven. On the supply side, the Agricultural Finance Corporation -- the parastatal responsible for making loans to farmers -- has never succeeded in channeling funds to many small farmers. In addition, it is difficult for a lender to foreclose on land in Murang'a; buyers outside the lineage would face great difficulty in purchasing the land. Furthermore, a recent presidential directive aimed at minimizing land disputes requires family members' in addition to title-holders' agreement prior to any sale or use of land as collateral (District Lands Officer, Murang'a 1991). Under such circumstances, it is not surprising that there is little supply of land-secured credit, and those who do receive such credit frequently pull political strings or have access to substantial off-farm income.

The demand side is less clear. Bevan et al (1989) argue that there are several profitable investments that farmers in such communities would make if financial resources were available. During our surveys, farmers informally corroborated their analysis. At the same time, many farmers said they would never accept a land-secured loan if there were the least possibility of losing their land. Land for these Kikuyu is worth more than its collateral value or agricultural use, and thus if profitable investments entail some risk, demand for land-secured loans may not materialize. In the absence of supply, however, we are unable to determine the true importantance of such demand considerations.

Thus, titling has not led to an increase in land-secured credit at least in part because of a failure to develop effective rural financial institutions. Even if such institutions were in place,

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for relief. Note that the other household with a land-secured loan also has several children with salaried positions.

however, it is not clear that such credit would have expanded rapidly because of the difficulty lenders would have redeeming collateral, and because of possible limits on the demand for such credit. These conclusions are in accord with Shipton's (1992) findings in western Kenya.[9]

Investment

According to the arguments in favor of land entitlement, the added security gained by titling is supposed to induce more investment in land improvements directly, while the increased availability of land-secured credit should increase these investments indirectly. The Kenyan farms, indeed, have seen considerably more investment than the Tanzanian farms since independence, primarily in coffee.[10] This result is related to past policies toward cash crops, however, rather than those toward land.

African farmers in what was then Tanganyika have grown coffee since the turn of the century. In Kenya, however, settlers were able to prohibit Africans from growing coffee in most areas until the fifties. The dislocations resulting from the Mau-Mau revolt and some continuing restrictions delayed most coffee planting until after 1960. By 1960 our households had planted coffee on about 14 acres (3% of the total area of the sample). During the next eight years over 250 additional acres of coffee were planted. This considerable investment, however, was not dependent on the land reform as the Tanzanian case clearly shows. In Kilimanjaro region as a whole, area under coffee expanded almost as rapidly in the 1920's under indigenous tenure, with the number of growers increasing from a few hundred before 1920 to about 7000 by 1926 (Moore 1986). In addition, African smallholders did plant coffee prior to land registration in those few areas of Kenya where they were not prohibited, such as Meru (Haugerud 1989).

Part of the reason for these investments in the absence of legal title is explained by the security of landholding under indigenous tenure. As long as they were using the land, lineage members could expect to keep the land and give it to their descendants. For those who were not

[9] Shipton (1992) states further that the gains from rural credit programs are illusory, arguing that increasing both savings and investment within the rural community is a more desirable goal.

members of the lineage, the indigenous system had a different form of protection. Both the Chagga and Kikuyu allowed "tenants" on land belonging to one lineage; those tenants paid a fee up front for use of the land. The lineage could redeem the land at any time by repaying the original amount, but *the redeemer had to reimburse the tenant for any improvements made to the land.* Trees in particular were vested in the planter, not the landowner (Moore 1986, Dewees 1991). Thus, even with some insecurity of tenure, the risks of improving land were mitigated by the indigenous system. With increased individualization of land rights under the indigenous systems between the 1920's and the 1960's, it is likely that our sample of Kenyan farmers would have invested rapidly in coffee during the 1960's even if the land titling had not taken place. [11]

Land Market Transactions:

Table 10.1 presents data on all land market purchases, sales, and inheritance from independence to the time of our survey, as recalled by the present heads of the households in our sample. We trace households from independence to 1991. If the present household did not exist at independence, the data for that year concern the father of the present head of household. We are thus following land transactions and distribution for the households in our sample and their predecessors. Partitions represent land which others -- usually brothers of the present head -- inherited between independence and 1991. Such divisions at inheritance have clearly been the dominant type of transaction. These partitions are voluntary transactions. Indeed, there is almost no evidence of an involuntary loss of tenure by any of our households at any time since independence.[12]

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[10] The Kenyan community in addition has invested considerably more in improved livestock. This difference in investment does seem to be influenced by government policies, but those concerning livestock development rather than land policies.

[11] Dewees (1991), however, argues that the *consolidation* rather than the registration program affected the growth of coffee production as considerable labor was freed for farming as opposed to traveling and guarding disperse plots.

[12] The one exception to this statement concerns the family of the man who was chief in the Tanzanian community at independence. President Nyerere abolished the office of chief immediately after independence, and confiscated much of "their" land (particularly in the lower, non-coffee areas) which they had allegedly confiscated for themselves in previous decades. We have presented our records beginning after this reallocation.

Table 10.1: Transactions in Land from Independence to 1991, by Size of Holding at Independence

	TANZANIA			KENYA		
	Size of Landholding			Size of Landholding		
	Smallest Tercile	Middle Tercile	Largest Tercile	Smallest Tercile	Middle Tercile	Largest Tercile
Total area of holdings at independence (acres)	116	248	494	61	115	277
Transactions through 1976						
Local Purchases	12	13	37	7	0	26
Distant Purchases	0	0	0	0	1	14
Sales	0	-5	-5	0	0	0
Partitions	-5	-40	-153	-11	-29	-70
Other	3	4	-17	4	0	0
Total area of holdings 1976	126	220	356	61	87	246
Transactions 1977-1991						
Local Purchases	6	3	0	4	2	1
Distant Purchases	0	0	0	0	18	9
Sales	0	-2	-4	0	0	-5
Partitions	-16	-48	-48	-20	-23	-74
Other	6	-7	4	1	0	-1
Total area of holdings 1991	122	166	308	46	85	176
Total area of local holdings 1991				46	66	153
Net % Change in total holdings	4.4	-33.2	-37.7	-25.3	-26.2	-37.4
% change at annual rate	0.1	-1.3	-1.6	-1.0	-1.1	-1.7
Net % Change in local holdings				-25.3	-42.8	-44.7
% change at annual rate				-1.0	-2.0	-2.1

Notes: Results are aggregated across 115 households from Kenya and 116 households from Tanzania. Data from independence and 1976 are based on reports in 1991. Earlier years represent holdings of the father of the present head if the present household came into existence after independence. "Distant purchases" are purchases of land more than 40km from the homestead.

There are significant amounts of purchases, however; an amount equal to about 18% of the total holdings at independence was purchased by the Kenyan households during the years since then, while the equivalent figure for Tanzania is about 8%. These amounts correspond to 0.6% and 0.3% of total land owned being purchased annually. At first, this seems to support the contention that titling has created a more active land market Kenya, and that Tanzania's policies forbidding land sales are somewhat effective. The majority of land purchases in Kenya, however, have been in other parts of the country, primarily in the areas formerly farmed by European

settlers (called the "White Highlands" before independence). In these areas the land market is much more fluid than in the areas reserved for Africans during the colonial era (the "reserves"). In addition, land is today considerably cheaper in the former White HIghlands even taking account of relative agricultural potential. Some farmers have chosen to sell their land and leave Murang'a altogether, buying up to three times as much acreage in another location (Okoth-Ogendo 1991). Clearly our sample of farmers presently residing in Murang'a could not pick up these dynamics. The one piece of evidence we have in this regard is that three out of the original 120 households we picked from the 1989 census listing form had left the area; two had sold their local land and bought farmland elsewhere.

Once the distant purchases are excluded from total purchases in Kenya, the percentage of local land purchased in Kenya and Tanzania as a percentage of land held at independence is virtually identical at 8% to 9%. Thus we conclude that titling did have an impact on the land market in Kenya, but *not* on the market for land in the former reserves. Entitlement on the former white highlands has led to an open market that attracts some members of the community, along with members of other ethnic groups; there are no areas of that kind where members of any ethnic group can come and buy land in Tanzania. Land owned in these areas now accounts for about 14% of all the land owned by our Kenyan sample. There is no reason to believe that land registration in the former reserves was necessary for this land market development.[13]

Changes in Inequality of Landholdings

The evidence provided so far gives little credence to the equity concerns regarding land entitlement raised by the Tanzanian government among others. Table 1 clearly gives no support to the contention that more agriculturally-productive farmers have bought out less agriculturally-productive farmers. Only one farmer in our Kenyan sample ever sold land; this is the man who sold to help repay his land-secured loan (see footnote 9). Even if the 9% of the original land purchased locally by our Kenyan sample all belonged to the least efficient farmers and had been purchased by farmers who were 50% more productive, the impact on average annual productivity

growth over thirty years would be only about 0.15% per year. We believe even this low number to be an overstatement of the impact, since some of the farmers who have left the area are still farming in other areas, in many cases on plots larger than the one they left. Furthermore, plots in the former reserves have a value for sale above the net present value of future agricultural income, as most members of the tribe want to live out their years on traditional land.[14] This premium could dominate the differences in agricultural value of land as seen by agriculturally productive versus less productive farmers, so the movement of land to more productive farmers fails to occur.

Changes in inequality over time can be analyzed dynamically, by following individual households from one year to the next, or statically, by looking at changes in the size distribution of landholdings at different points in time.[15] Table 1 begins the dynamic analysis by following particular households from independence on. There have been some important differences in land distribution between the countries. The smallest tercile of landholders in Tanzania actually *gain* in total area during the time since independence, losing only about 10% of their land to partitioning and other transactions and purchasing more than that. Even in Kenya, the percentage decline in area for the lowest tercile is less than that for the larger landholders, particularly when only local land is included. This would indicate some decline in overall inequality in both countries, with a larger decline in Tanzania.[16]

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[13] Land registration in the reserves, however, does allow a farmer to sell ancestral land in order to buy more land in the former White Highlands. Thus, registration may have eased the acquisition of this distant land.

[14] Haugerud (1989) documents this statement in her study area, and finds that investment in agriculture is not an important reason for purchasing land.

[15] Because of the retrospective nature of our data, the samples for 1976 and independence are not random, since there is no possibility of sampling households which were in existence at independence, but have since left the area or gone out of existence. This analysis of inequality thus measures changes in land distribution for the families still living in the area in 1991, rather than for all households in the communities during the earlier years. How the statistics of inequality for this sample of households relate to statistics for the whole communities in earlier years is impossible to know. If those households which have gone out of existence or left the community are predominantly the smallest landowners, then our statistics will underestimate the degree of inequality in the communities for earlier years. We believe this is the most likely result.

[16] The difference in the behavior of the smallest tercile towards inheritance may result from a cultural difference between the two ethnic groups. Kikuyus generally divide their land among all of their sons, while Chagga traditionally provide land only for the first and last son. Perhaps those with very small holdings are using this cultural difference to subdivide less in Kilimanjaro. This would be consistent with the findings of Walker and Ryan (1990) in India.

Another way of examining the dynamic changes in land distribution is to consider movements between the terciles. One-half of the Tanzanian households were in the same land distribution tercile in 1991 as in 1961; the similar calculation for Kenya is 46%. For both countries, four households who began in the lowest tercile ended up in the highest tercile; three households from Tanzania and two from Kenya began the period in the highest tercile and finished in the lowest. These numbers are strikingly similar for the two countries.

Figures 1 and 2 present this dynamic information more completely. These figures plot the natural logarithm of land held at independence on the horizontal axis versus the natural logarithm of land held in 1991 on the vertical axis. Since points on the line indicate households that held the same acreage in 1991 as at independence, those households above the line have increased acreage during the period while those households below the line have lost land. Clearly, for Kenya most of those who were able to significantly increase their landholdings bought distant land. In Tanzania, six of the fifteen smallest landholders at the time of independence increased their holdings most substantially; these six account for the increase in landholdings for the lowest tercile. Other than those six households, there is no obvious change in inequality visible in the scatterplots. Thus, the dynamic analysis indicates that the smallest landholders in Tanzania at independence have done better than their Kenyan counterparts in increasing the relative size of their landholdings. Other than that, there appears to be little difference between the countries in terms of changes in land inequality.

The static analysis -- reordering the households from smallest to largest in each time period -- tells a somewhat different story. Figures 3 and 4 present Lorenz curves for the distribution of landholdings at independence, 1976, and 1991. Inequality increases over time for both countries. In Tanzania, however, the increase is only in the later period. The Gini coefficient

Figure 1: Land Holding Size, Tanzania
1961 vs 1991

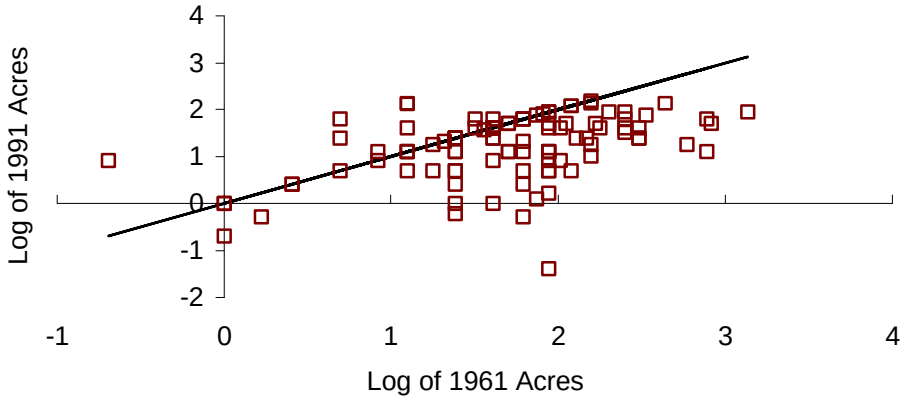


Figure 2: Land Holding Size, Kenya
1963 vs 1991

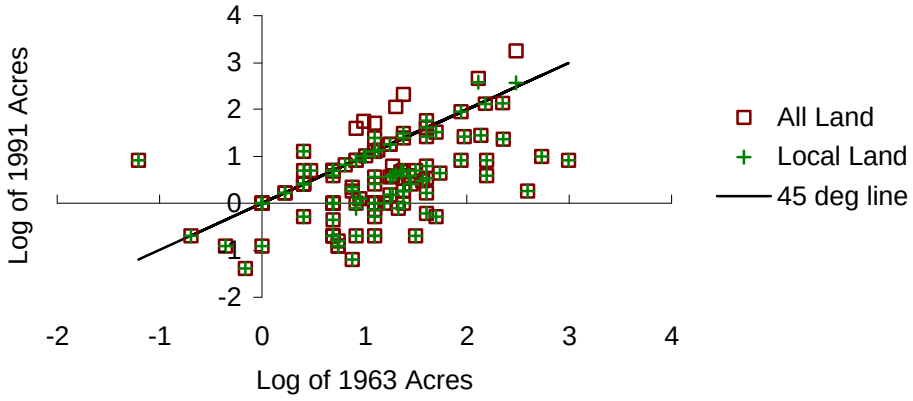


Figure 3: Lorenz Curve of Land Owned
Tanzania

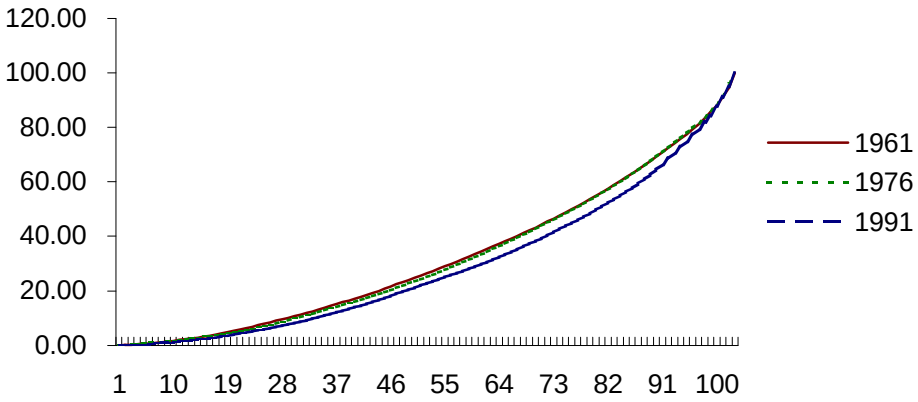
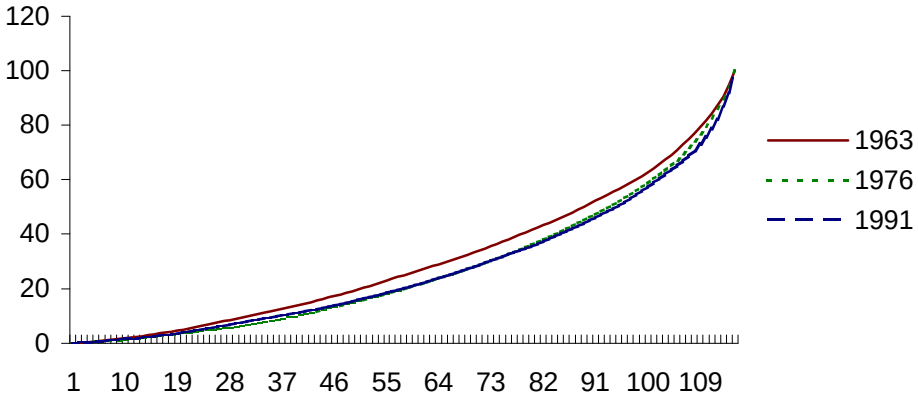


Figure 4: Lorenz Curves of Land Owned
Kenya, Local Land Only



The difference in inequality at independence may have resulted from the process of land consolidation in Kenya -- it is widely contended that supporters of Mau-Mau suffered in the process (Ng'ang'a 1977) -- but without data for the early fifties, a formal comparison is impossible.[17] The titling of land and awarding of exclusive rights to individuals may have disempowered some of the poorer members of society, as argued by Okoth-Ogendo (1976) among others. The more important statistic for our purposes, however, is the larger increase in inequality among the sampled households in independent Kenya rather than the inequality at independence. This larger increase is consistent with the contention that the change in tenure arrangements exacerbated preexisting differences in inequality.

This contention is testable from our data. The argument that the change in tenure status increased inequality over time assumes that purchases and sales of land caused this change in inequality. So the relevant question is, what would the size distribution of land have been in the absence of any sales or purchases? We can construct this counterfactual distribution by returning to Table 1 and excluding all purchases and sales of land. The only transactions included in this case are partitions and "other" (mainly marriage gifts and receipts), which are assumed to be the same in the absence of purchases and sales. When this is done, the Gini coefficients for Kenya for 1976 and 1991 in the absence of purchases and sales are 0.458 and 0.487, respectively, compared to the actual numbers reported above of 0.461 and 0.465 for local lands.[18] Thus land purchases and sales in the local area had virtually no impact on inequality in the 1963-1976 period, and they actually decreased inequality slightly in the 1977-1991 period. The contention that the change in land tenure arrangements led to increased inequality of landholdings in Kenya is therefore incorrect.

One measure of land inequality among our households has increased, therefore, in both countries since independence, and somewhat more in Kenya than in Tanzania. This change in

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[17] In South Asia, Cain (1981) and Walker & Ryan (1990) asked for transactions since the father of the present head inherited land. Given all the upheavals in Kenya's Central Province during the fifties, any information pre-dating the emergency would be entirely speculative.

[18] The Gini coefficients for Tanzania in 1976 and 1991 excluding purchases and sales are 0.334 and 0.389. As in the Kenyan case, purchases and sales have virtually no impact on inequality in 1976, and slightly decrease inequality in the later period.

inequality, however, is not the result of land policies. As far as we can tell, the change results from differences between the communities in the method of partitioning land at inheritance. Continued movement of households between landholding terciles and the fairly small size of even the largest holdings indicate that the polarization of these rural communities into a landed and landless class is not occurring.[19]

DISCUSSION

None of the hypotheses either for or against land entitlement is substantiated by our results. Credit markets, investment, land markets, and changes in inequality appear to be remarkably similar in the two communities, given the widely divergent policies. In each case, the indigenous system of land tenure continues to be more important than stated government policy; given the similarities of the indigenous systems, the outcomes for land, credit, investment, and inequality are also similar. This manifests itself in the Kenyan site as large differences among transferability, ownership, having title, and having usage rights to the land.

Even in areas such as our Kenyan site where adjudication and titling were accomplished years ago, a sharp distinction exists between ownership and holding title. Formal changes of title are lengthy and expensive, while paying for the cost of registering a subdivision is not considered worthwhile if there is no dispute within the family (Shipton 1988). Further, statutory limits on minimum holding size and high transactions costs of title transfers create incentives for households not to report land transactions. Title holding therefore does not necessarily imply ownership, and a significant number of titles are held by persons not owning the land, or bear names of deceased persons still pending change of title to inheriting holders. Similarly, a large number of current land owners may not hold titles to their holdings (Haugerud 1989).

As for usage rights to the land, a significant proportion of the households use land which by title belongs to the father of the household head. Although land titling by law gives the title-

[19] The largest five holdings in the Kenyan sample average 16 acres in 1991; the largest five in Tanzania, 19 acres. This is not to say that unusual farmers are unable to amass large holdings. Kerner (1988) tells the story of a Chagga informant who amassed over 1500 acres of land in the Kilimanjaro area during the early 1980's.

holder complete control over the land and thus potentially disenfranchises those who, under indigenous tenure, have some usage rights, many extended family members continue to use land entitled to another. Overall, considerations for social insurance for immediate family members appear overriding in the land ownership arrangements in these communities. This seems the case for both the young, interested in adequate access to land for crop production, and the old, interested in retaining effective family ties as insurance against unproductive years. Retention of usage rights therefore appears mutually beneficial to both the older landowning relatives, and the younger ones. Some persons, however, have lost usage rights that would have been guaranteed under the indigenous system; Mackenzie (1990) reports oral histories of Kikuyu widows who have lost all such access to land. Such access seems especially critical when related to food production, although in our sample some usage rights are also exercised in coffee production.

Granting title deeds has not given the title-holders complete rights of transferability, as evidenced by the large degree of litigation that takes place when a son is disinherited, and by the presidential directive mentioned above. Thus, some usage rights continue to limit transferability of land in the community. This arrangement appears to have so far minimized the likelihood of absolute landlessness, but increased the incidence of multiple subdivisions potentially leading to a preponderance of minute, uneconomical landholdings. Whether or not this leads to decreasing incomes will depend on the rate of population growth and the vibrancy of the non-agricultural economy. The unclear legal status of these claims also has caused a high number of land disputes.

Thus, land titling in Kenya has in many ways caused more problems than it resolved. One response of the local communities to these problems has been to ignore the titles, and revert to the indigenous system of land tenure. We do not want to argue, however, that these indigenous systems are ideal, or that governments should not have intervened at all in land policy in either country. The two cases differ. In our Tanzania site, land policy itself seems to have had no impact whatsoever on the community. The traditional system was preferred by the people of the community and they continued to enforce it even while it evolved to better suit their needs. Central government policy was rejected by the Chagga, and in the absence of a cadre of officials

dedicated to enforcing the law, it became more or less irrelevant, with positive results for security of tenure and investment. In some parts of Tanzania, central government policy was imposed more forcefully, *leading to insecurity of tenure.* Thus, government policy can be a primary source of insecurity of tenure.

In Kenya, the traditional Kikuyu land tenure arrangements had broken down substantially by the time of the emergency (Sorrenson 1967). Indeed, the Mau-Mau revolt can be interpreted as an internecine war between those Kikuyus who had recently lost their squatters' rights on white farms, and those who refused to recognize the rights of the returning squatters to the newly-scarce land in the reserves (Bates 1989). Land-allocating institutions did not develop fast enough among the Kikuyus to avert civil strife. Something had to be done; the colonial government decided to overturn the entire system. This degree of intervention was extreme in both extent and expense, and had negative results on the community. The Kikuyus then modified the land registration system informally to suit their own needs, maintaining lineage rights to specific ridges and usage rights to some relatives, thereby overriding the legal rights of individual title holders.

These two cases exemplify the process of induced institutional change formulated by Hayami and Ruttan (1985) and illustrated by Hayami and Kikuchi (1981). Institutions, like technologies, respond to economic incentives, and evolve over time to take advantage of those incentives. The indigenous land tenure arrangements responded positively to the need for increased security of tenure and increased individualization of rights. In Kenya, however, the system could not adjust to the shock of having to absorb quickly a large influx of returning squatters, who had lost many of their usage rights to land while away.

The role of government then is not to overhaul the system; such overhauls can be expensive and ineffective, as we have shown. Rather, government can guide and coax, giving incentives to move towards more individualization while maintaining usage rights of others, but allowing for the indigenous system to evolve rather than be overturned. The key question for the government to ask is, "What is the minimum action by the government necessary to give farmers the incentive to make long-term investments in their land?" In many cases, the answer will be, "Do nothing, for the indigenous system gives adequate incentives." In other cases, government

intervention itself will be the primary source of tenure insecurity. Exceptions will arise, however, in special cases, such as areas where the indigenous system is under considerable stress, settlement areas, and zones of ethnic conflict. Even in these areas, however, the large body of evidence presented here and elsewhere concerning the ineffectiveness of land titling should shift the burden of proof to advocates of titling. While some government intervention may be necessary in some areas, steps short of granting title deeds, with all the associated fiscal and social costs, may accomplish government objectives. We are in complete agreement with Migot-Adholla and others (1991), who conclude that governments, while being ready to intervene to assist in the development of tenure arrangements, should focus their scarce resources instead on "the real constraints on agricultural productivity" of infrastructure, market efficiency, and production technology (page 173).

CONCLUSIONS

We find virtually no difference in the outcomes of radically different policies towards land in Kenya and Tanzania, for our two villages in the coffee zone. Neither community is able to use land as collateral for formal-sector loans; security of tenure was not enhanced by entitlement, and thus there was no additional incentive to invest in land; neither community shows evidence of small, inefficient farmers selling out to larger, more efficient farmers; in neither community have land purchases and sales caused increasing inequality in the ownership of local land among sampled households. Given these results and increasing empirical evidence from a variety of African countries, radical reforms of land policies which are expensive both in financial and manpower terms are unlikely to be cost effective. Governments can best devote their resources to other uses, while standing ready to intervene to the minimum extent possible in the few special cases where some tenure reform is required.

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