Chapter 24

Women's Land Rights in the Transition to Individualized Ownership: Implications for the Management of Tree Resources in Western Ghana

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This study explores the impact of changes in land tenure institutions on women's land rights and the efficiency of tree resource management in western Ghana, where cocoa is the dominant crop. Although communal land tenure aims to provide equitable access to land for all households, women's land rights in the region are weaker than those of men, as is often the case under customary land tenure systems (Lastarria-Cornhiel 1997). If women are blocked from having secure land rights, and therefore from individualized investment in land, the resulting barrier to increased productivity will diminish their incentives to sustain resource use over time (Meinzen-Dick et al. 1997).

Communal land tenure institutions may evolve toward greater individualization and more secure individual land rights because of population pressure and the need to intensify agricultural production (Ault and Rutman 1979; Bruce and Migot-Adholla 1993). The Akan households in the region, for example, have granted relatively strong individual ownership rights to those who plant trees. Under such institutional rules, a community member who has acquired family land through inheritance and allocation may have strong incentives to plant trees in order to obtain secure land rights. Whether these rights differ between men and women may have important consequences for equity and the efficiency of forest resource management.

For further details, see Quisumbing et al. (2001a, b).

Land Tenure in Western Ghana

This study is based on an extensive survey of 60 villages in the most active cocoa-growing regions in Ghana. The whole area is under customary land tenure, and all land is ultimately controlled by the village chief on behalf of the community. The dominant ethnic group in these villages is the Akan (87 percent of sample households). While Akans have traditionally followed matrilineal inheritance, the mode of land transfer has been evolving over time. Appropriated village land is increasingly being transferred directly to wives and children, and even family land is often transferred to them with the consent of family members, particularly after the land is planted either wholly or partially with cocoa trees. Such transfers while both parties are still living, or inter vivos transfers, are termed "gifts" in the study areas, and individual rights on such land are firmly established.

Land rights are more clearly individualized among migrants, who either have nuclear families or practice patrilineal inheritance, by which a relatively small number of sons within a single family is qualified to inherit the father's land. Women's inheritance rights were strengthened by the passing of the Intestate Succession Law (ISL) in 1985, which allows children and wives to gain access to land that they were previously denied under traditional law. Under the ISL, the estate of a man who dies without leaving a will is divided as follows: three-sixteenths to the surviving spouse, nine-sixteenths to the surviving children, one-eighth to the surviving parent, and one-eighth in accordance with customary inheritance law (Awusabo-Asare 1990). The common interpretation of the ISL, however, is one-third each for the spouse, children, and matrilineal family.

Determinants of Land Tenure and Acquisition

Analysis of what determines land tenure at the village level shows that population pressure first induces institutional innovation toward individualized land tenure. Gifts, moreover, allow villagers to circumvent the traditional inheritance rule in matrilineal society, by allowing wives and children to receive property directly from husbands. The patrilineal migrant population, however, acquires cultivation rights mainly by renting land or sometimes by purchasing land from indigenes.

The study also shows what determines land acquisition at the household level. A Ghanaian man follows a sequential decisionmaking process with respect to land acquisition over his life cycle: if forest land is available, he

acquires it through clearance when he is young; he acquires the family land through inheritance, allocation, and gift when he gets married; and later he acquires the additional land through renting and private purchase. Table 24.1 presents regressions on the determinants of land acquisition at the village level, controlling for unobserved village-level factors. These regressions show that women have a relative disadvantage in acquiring land through forest clearance because it is a male activity. Female heads of households are also significantly less likely to have obtained land through purchase and rental, suggesting that they may be disadvantaged, relative to men, in land sales and rental markets. Female heads of households appear disadvantaged in all modes of land acquisition, although their relative disadvantage is less significant for acquiring family land.

Table 24.1 Determinants of land acquisition at the household level: Tobit regression with village fixed effects

	Forestland	All family land[a]	Purchased, rented, or borrowed non-forestland
Forestland			–0.41*
Family land			–0.71*
Age of household head	7.65**	0.17*	0.15
Year of first marriage of household head	–0.98	0.11*	–0.35
Dummy for household head born outside of village	54.39*	–5.16**	9.41*
Years of schooling of head	–6.42*	0.44**	0.39
Dummy for female-headed household	–65.08*	–0.79	–16.98
Dummy for patrilineal household	–87.20**	–4.83**	0.90
Chi-square	30.4	222.2	30.3
p-value	0.0	0.0	0.0
Number of observations	386	386	386

Note: Least absolute deviations estimator. ** indicates significant at the 1 percent level, and *indicates significant at the 5 percent level, one-tailed tests.
[a]Family land includes allocation, inheritance, and gifts.

Determination of Cocoa-Tree Planting

How does land tenure affect the management of land in terms of the proportion of area planted to cocoa and yield per unit of cocoa-planted area? We hypothesize that cocoa-tree planting is more profitable than shifting cultivation and that higher cocoa yields indicate higher production efficiency, both of which seem reasonable in view of the continued expansion of cocoa area. We assume that the distribution of parcels by land tenure type is predetermined for each household but may differ within each household, depending on the gender of the parcel owner and the mode of land acquisition.[1]

Table 24.2 presents regressions on the proportion of cocoa-planted area as well as cocoa yields at the plot level. Parcel size is shown to have an extremely significant and negative effect on the proportion planted to cocoa, implying that an inverse correlation exists between parcel size and tree planting. This finding shows that the land rental market, not to mention the land sales market, is imperfect, because some portions of the parcel could have been rented for tree planting if the land rental market worked effectively.

A more important finding is that the dummy for allocated family land has a positive and significant effect on tree planting. It seems that the expected strengthening of land rights associated with tree planting provides strong incentives to plant trees on allocated family land. Dummies for land parcels with strongly individualized ownership, that is, gift, appropriated village land, purchased village land, and purchased private land, all have positive coefficients, but only the dummy for purchased private land is significant. The dummy for a female parcel owner has a negative but insignificant effect on the proportion of area planted to cocoa, suggesting that there is no significant difference between male and female parcel owners with respect to tree planting. If women receive land only after a large portion of it has been planted to cocoa, as our field observations suggest, subsequent observations will not reveal any difference in the probability of planting cocoa between male and female parcel owners. The percentage of parcel area planted to cocoa is positively related to the percentage of cocoa area at acquisition. The

[1]To control for possible correlation between land tenure variables and unobservable household characteristics (which may affect the distribution of parcels by tenure), we applied the household-level fixed-effects model for both the proportion of area planted to cocoa and cocoa yields. For comparison, and to test for the importance of parcel-level heterogeneity, we also applied the random effects model to the estimation of the cocoa yield function.

Table 24.2 Determinants of proportion planted to cocoa and cocoa production per hectare at the parcel level, selected coefficients

	Proportion planted to cocoa on plots with mature cocoa (Tobit with household dummies)	Yield (production/cocoa area)	
		Household fixed effects	Household random effects
Distance to parcel	0.156	–18.364*	–11.123*
Parcel size (hectares)	–0.028**	–3.483	–1.584
Dummy for female-held parcel	–0.049	–74.902	–74.147
Percentage cocoa area at acquisition	0.453**	–46.308	–53.337
Land tenure dummies			
Dummy inherited and patrilineal	–0.228	–90.667	39.370
Dummy allocated family land	0.214*	–147.425*	–116.241*
Dummy allocated family and patrilineal	–0.182	–98.569	–13.576
Dummy land received as gift	0.103	–87.839	–55.874
Dummy gift and patrilineal	–0.171	48.031	15.412
Dummy appropriated village land	0.191	–128.019	–88.430
Dummy purchased village land	0.210	–98.686	–16.767
Dummy privately purchased land	0.247*	–156.347	–98.131
Dummy rented land	0.206 *	–167.470*	–133.855*
Dummy ownership through renting	0.379**	–99.311	–69.391
Log-likelihood	–73.92		
Chi-square	393.47		
p-value	0.00		
Breusch-Pagan Langrangian Multiplier Test (*p*-value)		34.12 (0.00)	
Hausman Specification Test (*p*-value)		21.90 (0.29)	
Number of observations	391	391	

Note: Regressions included controls for tree characteristics in the yield regressions, years since acquisition of the parcel, percentage forest area at acquisition, and the real cocoa farmgate price at acquisition, and, for the random effects specification, family-level variables such as sex and age of the household head, years of schooling of the household head, a dummy for a patrilineal household, household size, and the total landholdings of the household. ** indicates significant at the 1 percent level, and * indicates significant at the 5 percent level, one-tailed tests

importance of previous tree planting as a prerequisite for receiving gifts, however, appears to differ by gender. Other results show that men had to plant only 20 to 25 percent of a parcel of land with cocoa trees before the land was transferred to them as a gift. Women, however, had to plant between 40 and 50 percent of land to cocoa before acquiring it as a gift.

We also estimated cocoa yield functions with household fixed and random effects. The estimation results of the cocoa yield function contrast markedly with those of tree planting. First of all, for both fixed- and random-effects results, the dummy for allocated family land is negative and significant. Thus, tree planting density and subsequent management intensity of cocoa trees are lower in allocated family land, even though the proportion of tree-planted area is larger. Such behavior is understandable if one plants trees in order to obtain permission to transfer land as a gift. This finding is confirmed by field interviews that suggest the practice of "strategic planting" of cocoa trees to preserve permanent rights, even if the farmer cannot maintain the trees.

Second, the coefficient of the dummy variable for current renting is negative and significant in both fixed- and random-effects specifications. Contrary to the conjecture of Boadu (1992), share tenancy in Ghana's cocoa fields is found to be inefficient. This finding is consistent with the finding of an inverse correlation between parcel size and the proportion of area planted to trees, because it is not necessarily advantageous for a landowner to rent out a portion of a large parcel to a tenant if tenancy is inefficient.

Third, the coefficients of dummy variables representing gift, appropriated and purchased village forest land, and purchased private land are all negative, even though none of them are significant. If stronger land tenure security leads to sufficiently greater incentives to invest in management of trees, the coefficients of these dummy variables ought to be positive and significant. It may well be that once cocoa trees are planted, individual land rights are enhanced such that management incentives do not differ significantly among various land tenure institutions. This result is consistent with the finding of Place and Hazell (1993) that land tenure security does not significantly affect crop yields in several Sub-Saharan African countries.

Lastly, the dummy for female-owned parcels is negative, though only weakly significant in the random-effects specification. This finding shows that, controlling for differences in land tenure and accounting for unobserved heterogeneity, female parcel managers obtain lower yields on their cocoa plots. This finding is similar to that of Udry's (1996) study on Burkina Faso, which finds lower yields on maize plots cultivated by females within the same household. Although this result may indicate greater credit and labor constraints faced by female farmers, it also suggests inefficiencies in intrahousehold resource allocation, since the household could have increased aggregate yields by reallocating resources across male- and female-managed plots. It may also reveal that female parcel owners may concentrate more on the food crops grown on cocoa plots rather than on cocoa itself.

To sum up, the contrasting estimation results of cocoa tree planting and cocoa yield functions can be understood only if land rights are enhanced by tree planting, so that incentive structures are different for tree planting and management of trees. Incentive structures may also be different for male and female farmers within the same household.

Conclusions

The evolution toward individualized land-tenure systems in western Ghana has been facilitated by the stipulation of customary land tenure institutions that those who exert efforts to clear forests and plant trees will receive individual parcels of land. Some researchers argue that such evolutionary changes have detrimental effects on women's traditional land rights. Although this argument may be true in some societies, this study shows that in western Ghana, a wife who labors on a husband's cocoa plot usually receives a gift of land. This method is the most important mode of land acquisition for women. Legal reform has also provided women a means of obtaining access to the husband's land should he die intestate.

Given the need for agricultural intensification to meet demand and growth objectives, a major question arises: What types of policies can assist such evolutionary changes in a manner compatible with efficient and equitable development of rural areas? Land titling is feasible only if land rights are sufficiently individualized, but implementation of land-titling programs must pay special attention to gender issues. If men are traditionally owners of land, as in western Ghana, land titling may strengthen their land rights at women's expense. To be fair, men and women should be equally qualified to acquire land titles. Judging from the experience of Ghana, the promulgation of the 1985 Intestate Succession Law is likely to be an effective policy option for facilitating less gender-biased land inheritance systems in customary land areas. But attempts to equalize land rights of men and women will lead to gender equity and the improved efficiency and productivity of women farmers only if other constraints faced by women are also addressed.