Research Paper

LAND RIGHTS AND INTRA-HOUSEHOLD EMPLOYMENT AND RESOURCE USE IN THE PERI-URBAN AREA OF BANJUL,THE GAMBIA

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Research Paper
U.S. ISSN 0084-0815

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LTC Research Paper 126

Land Tenure Center
University of Wisconsin
January 1996

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CHAPTER 1

INTRODUCTION AND RESEARCH METHODOLOGY

I. Introduction

The peri-urban areas of Banjul and Serekunda in The Gambia share many of the characteristics common to Africa's metropolitan regions. Urban farming and horticulture by commercial units and smallholders are providing important sources of growth in agricultural output and exports. Informal trade, particularly of vegetables, fruits and sundries, is flourishing. Customary mechanisms of land allocation by the *alkalos* in villages are giving way to a robust market of land rentals, purchases and sales, mainly of residential property, in rural and urban areas. The physical urban frontier is expanding rapidly and, through the land market, is rapidly transforming agricultural lands into compounds, and villages into suburbs.[1] High rents and land scarcity in Banjul and Serekunda are driving urbanites to seek land in more remote peri-urban villages, while migrants from up-river and abroad, especially young males, are seeking land in the peri-urban area for housing, wage employment, and business opportunities, or to escape hardships elsewhere. Rural areas at the peri-urban periphery are being rapidly integrated into the urban marketplace, while the cities are being "ruralized" by those uprooted by drought, war (the Casamance, Liberia, and Mauritania), and the rural economic decline.

With a large tourist industry, a deep water seaport, and the Gambia river stretching through the heart of Senegal, The Gambia seemingly would hold considerable advantages in capturing value-added revenue from trade and services. Yet, if such advantages exist, they are not reflected in aggregate comparisons of production and income between it and its African neighbors. Its population of 875,000 earned only US$260/capita GNP in 1990 compared with US$340/capita for Sub-Saharan Africa as a whole (World Bank 1992, 218, 285). GNP/capita grew only 0.7 percent (0.2 percent for Sub-Saharan Africa) on average over the period 1965-90 (ibid.). Food production per capita declined at an average annual rate of -13.1 percent over the period 1975-80, but grew modestly (2.8 percent) over the period 1980-85 (World Bank 1989, 154).[2] Although food production has been outpacing that of Sub-Saharan Africa as a whole (-1.4 percent, 1975-80), its population continues to grow rapidly (3.2 percent/annum) and 15.5 thousand metric tons (3-year average, 1986-88) of food aid imports were still required to maintain food security (ibid., 4, 154, 158). Exports of groundnuts, once the mainstay of the rural cash economy, declined at an average annual rate of -15.2 percent over the period 1975-80, and -3.0 percent over the period of 1980-85. After a low of 12,787 metric tons exported in 1985, exports spiked to 22,950 tons in 1987, before

[1] Population growth of Banjul was 12.8 percent over the period 1973-83 and -4.0 percent over the period 1983-93. Serekunda's growth rate, as indicated for Kanifing, was 157.6 percent and 125.6 percent, respectively, over the same two periods, indicating extremely rapid population expansion in the peri-urban areas (1993 Population Census).

[2] The *World Development Report* (aside from basic indicators that are reported for all countries) publishes data only for countries with populations of one million or more. Recent data on food production, consumption and trade for The Gambia are not reported.

reportedly plummeting again in recent years (ibid. 61).[3] Despite major economic reforms taken by the Gambian government, gains in agricultural productivity have been slow in coming.

Recent government and donor policy has begun to emphasize export diversification, in particular, fruit, vegetables and flowers, to enhance growth in the agricultural sector. Donor and private investment in irrigation perimeters ("schemes") has helped to expand smallholder horticultural opportunities. The peri-urban areas with their favorable access to urban and tourist markets, airport facilities for exports, and access to agricultural inputs through the port should be well positioned to take advantage of the income growth generated by "non-traditional" exports. However, important questions remain unanswered about the long-term growth prospects. For example, are institutional rigidities—characterized by highly inelastic supply of land, labor, and capital—constraining horticultural output and employment? Has horticultural income growth been concentrated among a few households and companies or is it broad-based (both inter- and intra-household)? Has the growth been gender neutral or biased? Does the current administration of land by *alkalos*, or the lending of land to borrowers by founding families, confer adequate long-term rights for land improving investment (tree crops)? Are high transaction costs in the land market resulting in an unacceptably low rate of people moving into, or exiting agriculture, in response to changing economic conditions? These and other questions provide the focus of this study.

II. Peri-Urban Project

Work under the peri-urban project is being conducted by three institutions holding cooperative agreements with the US Agency for International Development: the Institute for Development Anthropology (IDA), the Land Tenure Center (LTC), and the Ohio State University (OSU). A research program of five interrelated studies was implemented beginning in January 1993 to examine the operation of factor markets in the Banjul and Serekunda peri-urban areas, and to assess whether factor-markets are constraining agricultural growth and employment, particularly in the horticultural sub-sector. These studies include:

(A) a three village survey of household production, employment, income, resource use, land transfers, land rights, and horticultural marketing (undertaken jointly by IDA and LTC);

(B) a survey of commercial land transactions involving land purchasers and sellers (LTC);

(C) a survey of vegetable traders and institutional consumers (hotels, restaurants) (IDA);

(D) a financial market survey of informal savings and lending groups (*kafos*, *osusus*) (OSU); and

(E) a case study of large horticultural export firms (IDA, OSU) and communal smallholder vegetable schemes (IDA).

[3] These official data do not take into account the cross-border trade in groundnuts with Senegal.

These studies take a multi-faceted look at the operation of factor markets underpinning production and trade in the horticultural sub-sector, and the vertical and horizontal integration of agents involved in the production and marketing of horticultural goods. The household production survey (A), the results of which are reported in this study, was aimed at assessing inter- and intra-household issues of market access and factor market constraints to land improving investment (trees, irrigation) and productivity. The survey is highly disaggregated by plot, gender, enterprise, and type of employment. Although the horticultural sub-sector receives special attention, the study is designed to permit a variety of highly disaggregated, multi-purpose analyses.

III. Overview of Report

Chapter 2 describes the research methodology used in activity (A) above, including discussions on site selection, research hypotheses, sampling frame, survey instruments, and interview procedures. In chapter 3, a socioeconomic profile is provided for households in the three survey villages and in the two categories indicating founding family status. Chapter 4 focuses on non-farm sources of employment and labor activity including wage- and self-employment, aggregate farm and non-farm sources of income, and remittances. Chapter 5 addresses land rights held by various categories of households but, in addition, provides detailed information on land access, mode of plot acquisition, mode of land alienation, and land conflicts. Finally, in chapter 6, detailed information is presented on land quality, land use, land improvements, fruit tree investment, and income and expenditure from specific agricultural enterprises including horticultural activities. A concluding chapter 7 provides summary comments and policy implications.

CHAPTER 2

RESEARCH METHODOLOGY

I. Research Design

A. Scheduling

Preliminary reconnaissance and planning trips were made to the study area in June and November 1992. These trips provided researchers with the opportunity to meet government officials, review documents, carry out reconnaissance work in peri-urban villages, visit commercial farms, and generally develop the research design (Little and Roth 1992). Upon the basis of these planning trips, studies (A,B,C,E) in chapter 1 were identified by IDA and LTC (OSU's design activity followed at a later date). After extensive visits throughout the peri-urban area, the decision was made to focus the field work in three sites and four villages—Sinchu Baliya, Sinchu Alhaji, Pirang, and Sanyang—on the basis of criteria identified shortly.

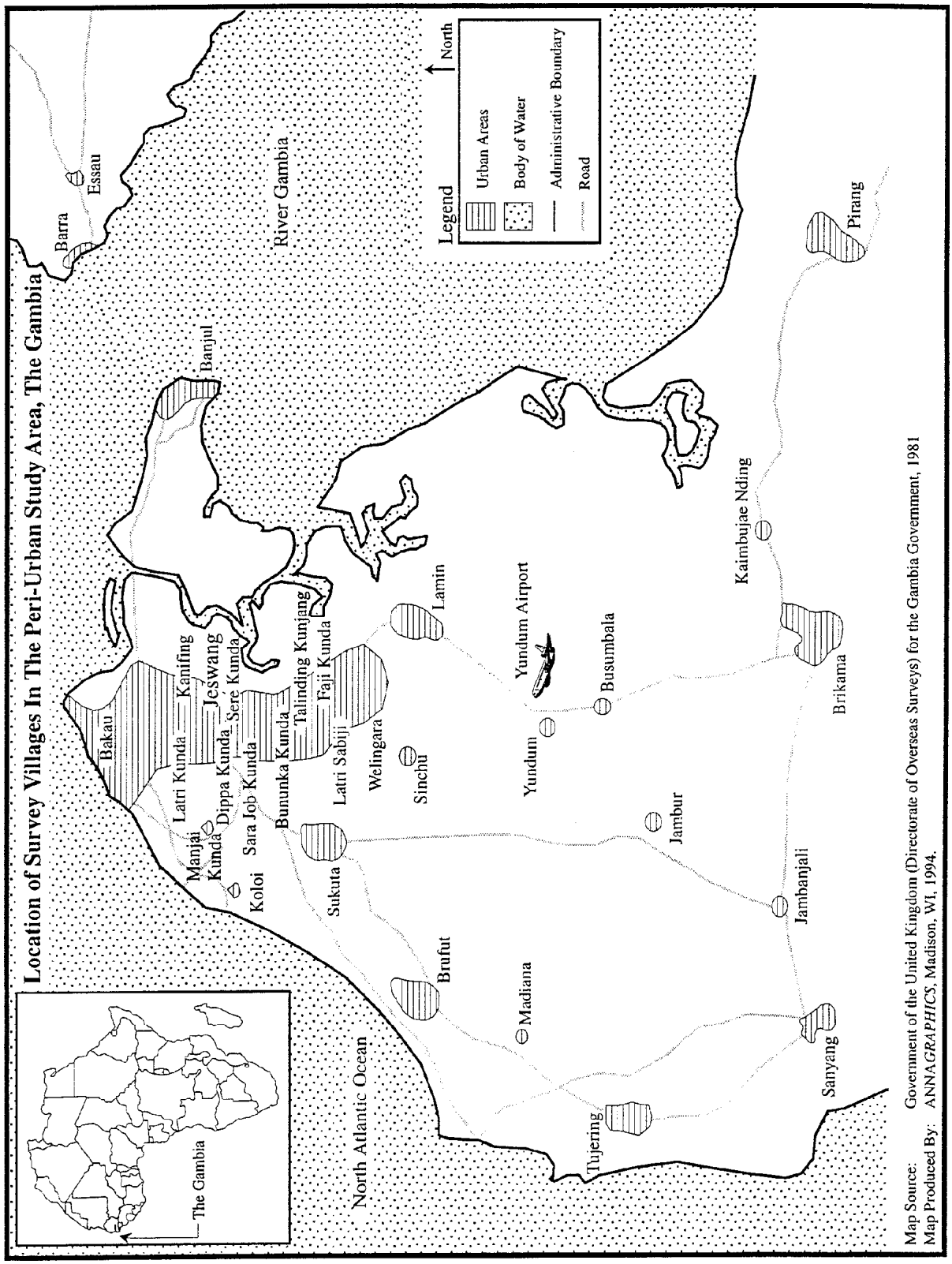
The organization and scheduling of field work required a careful balancing of two competing activities: (1) the vegetable season, January through April, required that the household production survey, trader and credit studies be implemented immediately to ensure that data collection corresponded as closely as possible to the time of horticultural production and marketing (February-April); and (2) the heavy emphasis on field work and the limited number of enumerators and Gambian researchers available required that the work be staggered to minimize excessive demands on personnel. Sub-sector studies (C,D,E in chapter 1) by IDA and OSU were thus carried out January to April 1993. LTC took the lead on designing the household production survey (with assistance of IDA) in January and February, followed by survey implementation March through May 1993. The land market survey (B in chapter 1), not being dependent on the agricultural season, was postponed until after the first set of studies neared completion; its research design was developed in February, the field instruments in May, followed by field implementation June to mid-August 1993.

B. Research Area

For purposes of the study, the peri-urban area of Banjul was defined as the northern- and western-most section of Western Division as far out as Pirang village in East Kombo District and Sanyang village in Kombo South District, excluding the urban areas of Banjul and Serekunda (Little and Roth 1992) (see figure 2.1).[4] It comprises an area roughly triangular in shape extending from Cape Point (the northern most point and urban center) to Sanyang village in the southwest, and to Pirang village in the south east. The district capital, Brikama, lies about midway on the line between Sanyang and Pirang, and is roughly 26 kilometers by air from Cape Point. The line running from

[4] Figure 2.1 is redrawn from land maps constructed in 1981. In light of the rapid population growth mentioned in chapter1, the urban boundaries marked are understated, particularly in areas north of the line from Brufut to Lamin.

Figure 2.1 Location of Survey Villages in the Peri-Urban Study Area, The Gambia



Cape Point south through Serekunda to Welingara marks an area of dense urban settlement and commerce. The village of Sinchu Baliya, at the border with Welingara (and Sinchu Alhaji several further kilometers onward), marks the beginning of a very dynamic band of rapid population settlement, sprawl of semi-finished cement foundations and newly finished compounds, and intense land competition between housing and farming. About 15 km of rural landscape then separates Sinchu from Sanyang (by air) and 18 kilometers separates Sinchu from Pirang.

C. Village Selection

Repeated reconnaissance visits over three separate missions were made to the survey villages, and others, before deciding upon final site selection. During each visit (June 1992, fall 1992, and spring 1993), villages throughout the peri-urban zone were visited and interviews were held with women in garden schemes, landholders, government officials in both regional and national offices, managers of large horticultural export firms, and the *alkalos* in each of the study villages. All of the four villages selected have access to garden plots, but each has different characteristics regarding proximity to the urban fringe, transportation costs, rate of settlement, population density, and land availability (see table 2.1). The villages are roughly situated along a continuum representing different degrees of market access and land scarcity. At one end is Sanyang with a relatively high land/resident ratio, few landownership conflicts, and far proximity from urban markets. At the opposite end is Sinchu (Baliya and Alhaji) with relatively high resident/land ratios, rapid population settlement, and close proximity to urban markets.

Interviews were held with the *alkalos* in each of the villages (two *alkalos* for Sinchu, one for Sinchu Baliya, a second for Sinchu Alhaji) using a structured format to help obtain comparable information about settlement history, land tenure arrangements, economic livelihood and change, importance of horticulture, and the function of indigenous institutions (*osusus*, *kafos*, women's groups, and donor schemes) in the village (annex A). A household listing was undertaken in February 1993 for purposes of determining the population of households in each survey village. As indicated in table 2.1, most villages comprised nuclear families, particularly Sinchu village. Size of villages ranged from 123 compounds and 169 households in Pirang to 417 compounds and 443 households in Sanyang.[5] Random sampling techniques were then used to select 40 households in each village for further study.

D. Research Setting[6]

Sinchu Alhaji was settled 28 years ago, Sinchu Baliya 60 years ago, Sanyang 75 years ago, and Pirang in even older times. In each instance, the village was founded by one individual or family in an area of forest or dense brush, followed shortly by a number of other migrant families who were invited by the founder to help clear and settle the land. These founding families continue to maintain

[5] As Sinchu is situated physically adjacent to metropolitan Welingara, its size cannot be compared with the more isolated peri-rural communities of Pirang and Sanyang.

[6] This section is based on structured interviews with the *alkalos* in Sinchu Alhaji, Sinchu Baliya, Pirang and Sanyang (annex A), and reconnaissance interviews with farmers and officials.

Table 2.1
Survey Design, 1993 Peri-Urban Household Survey, The Gambia

	Sinchu	Pirang	Sanyang
Number of compounds in village (from listing)	260	123	417
Number of households in village (from listing)	267	169	443
Number of households surveyed	40	40	40
Characteristics:			
Access by paved road to Yundum airport	H	H	L
Distance or time to Yundum airport	H	M	L
Proximity to urban fringe	H	L	L
Rate of settlement by urban migrants	H	L	M
Land scarcity	H	M	L
Increasing prices for residential land	H	M	M

H=high, M=moderate, L=low.

long-term ownership claims to the land in all village sites. Later arrivals borrowed land from the *alkalos* or the founding families.

The two Sinchu villages lie at the outskirts of Serekunda. Sanyang and Pirang are of nearly equal distance from Serekunda, but a paved road connects Pirang, and a laterite road connects Sanyang. Newcomers from Banjul and Serekunda, from up-river and abroad, are contacting the *alkalos* in all villages seeking land. Land may be allocated by the *alkalo* or founding families, but the *alkalo's* consent must be obtained for any transaction, and his involvement is required in any dispute. A tribute of "kola nuts" is typically offered to the "owners" of the land, largely as a symbolic gesture, but cash rents have recently emerged in Sinchu and Pirang. Agricultural lands are normally not leased, rented, bought, or sold to any significant extent in any site. Borrowed land must be returned at the season's end, although some families have borrowed the same land for decades. Residential property or land for the household's compound is bought and sold in Sinchu, less so in Pirang, and not at all in Sanyang. However, only the improvements on land are transferred through sale according to the *alkalos*, not the land itself.

A steady stream of migrants from up river, from Banjul and Serekunda, and from abroad have increased demand for land, particularly in areas closest to the city (that is, Sinchu). Land in Sinchu is now extremely scarce, and both *alkalos* have been forced to reclaim land from other households to make land available for maturing children in the village, and for newcomers.

Since the droughts of the 1970s and 1980s, and the decline of the groundnut industry, families have been substituting vegetable production for traditional crops into their farming systems. Vegetables according to all the *alkalos* visited are more profitable than other agricultural enterprises. Stranger farming has steeply declined due to lack of rain, the decline of the groundnut

industry, low farm incomes, and the spread of animal traction, but new labor arrangements are emerging to take their place. Casual workers, mainly from up-river and the Casamance are seeking employment for building fences, digging wells, gardening, and work on commercial farms. Women are primarily responsible for growing and marketing the vegetables. They report labor constraints in water lifting, cultivation and harvesting, but lack of capital for irrigation wells and fencing appears to be the main factor constraining private expansion of garden schemes in the peri-urban area.[7] Expanding the size of village schemes would require additional land, which is held by men, and capital for irrigation, which is scarce.

E. Political Structures

The *kabilo* is a ward or sub-division within the village. The core of the *kabilo* is a patrilineal kin group but it often accommodates temporary residents and permanent compounds not related to the patrilineage. The ward of the founding patrilineage has a central position of authority and prestige in the village. The *alkalo*, the most important person in the village, is generally the oldest male member of the oldest patrilineage. He has an assistant headman, either his next youngest brother or, in the absence of brothers, his eldest son, who will be expected to succeed him. The extent to which the succession follows this pattern depends on the personality and strength of the heir apparent and the security of this power base. A weak heir apparent may encourage other candidates from his *kabilo*, or even from another *kabilo*, to contest the position. This event will give rise to an election, the result of which will lead to the appointment of a successor. The various *kabilos* result from the settlement of different founding families within the same village. Their "high" social status within the community confers upon them considerable decision making authority in community affairs, land settlement, and allocation.

F. Research Questions

The survey instruments were designed to conduct an intra-household analysis of resource access and income opportunities. Detailed quantitative and qualitative information is collected on household demography, migration patterns, resources, asset accumulation, landholdings, land acquisition, land disposition, land rights, land and labor use, tradable input use, credit, cost of production, remittances, farm and non-farm income, and employment. Beyond the baseline information provided by the study, the research is tailored to test the following null hypotheses (H):

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[7] Donor countries and NGOs have established village gardens or "schemes" in many villages in the peri-urban area. The nature and performance of these schemes vary widely. The *alkalo* or founding families generally provide the land, usually several hectares. The donors and NGOs provide fencing, wells, irrigation infrastructure, and land improvements, along with some technical and financial assistance, at least in their early stages of operation. Women generally produce and market the vegetables, both on traditional low lying areas, and on the schemes. Large vegetable schemes developed by the EEC lie at the outskirts of Pirang and Sanyang, but not Sinchu. A number of small vegetable schemes developed by NGOs are scattered in the vicinity of Sinchu, but at some distance from the village.

H1. Repossession of land by the *alkalos* is resulting in tenure insecurity; such claims have been frequent and in some cases have represented significant welfare losses for the families concerned.

H2. The current system of customary tenure, whereby both household head and plot managers claim individual use rights to the same plot, creates tenure insecurity through uncertain definition and enforcement of rights.

H3. The founding families, without sufficient capital, lack the means to cultivate or invest in their entire landholdings. Borrowing families, having only seasonal use rights on the land of founding families, lack incentives to invest in long-term land improvements.

H4. Because tree planting establishes an individual's long-term ownership rights in the land, husbands are reluctant to let wives, and founding families are reluctant to let borrowing families make tree crop improvements.

H5. The land patronage system, whereby the *alkalos* and founding families loan fields to tenants is beginning to break down under urban influences, rising land value, and a declining land-labor ratio.

H6. The high transaction costs associated with the customary system decreases the collateral value of the land asset and serves as a constraint to long-term credit expansion. As real estate collateral is the backbone of mortgage-based lending and long-term corporate financing in developed capital markets, these tenuous rights pose an important constraint to capital-intensive agricultural investment.

H7. Land in donor schemes, constrained by capital for irrigation and fencing, and being provided by founding families, is foremost allocated to the women of founding families in the villages. Other women benefit through employment as hired laborers or traders.

H8. Founding families are able to mobilize higher levels of hired labor, as reciprocal labor is demanded in exchange for the right to borrow land.

H9. Plot specific factors (land rights, parcel quality) are more important than household specific factors (age, sex, education, access to non-farm income for capital) in explaining productivity and investment in land improving technology.

H10. Vegetable cultivation is resulting in the substitution of family labor for non-farm work in the dry season as the opportunity cost of female labor in vegetable production increases.

H11. Stagnant agricultural growth is partly caused by a customary land tenure system that constrains individuals from acquiring land to expand their size of farm or place of business, or discourages less productive farmers from willingly selling land and moving into other lines of employment or retirement.

These hypotheses are indicative and served as useful research questions to guide the research design. However, they are by no means exhaustive. As they were set before actual survey implementation, certain questions were made irrelevant by lack of sufficient observations for statistical analysis. And, as analysis proceeded, new hypotheses were raised that are covered in the course of this study.

II. Survey Instruments

The study comprises two components: structured interviews with the *alkalos* in each of the study villages to develop village-level case histories of settlement patterns, land allocation and transfers, employment, vegetable production and marketing, and local institutions (annex A); and a statistical survey composed of five separate questionnaires administered to selected members of each household in the sample (see Roth et al. 1993 for the actual questionnaires): (1) household head questionnaire, (2) economic adult questionnaire, (3) plot characteristics questionnaire, (4) plot manager questionnaire, and (5) vegetable production questionnaire.

- **Household head questionnaire**. A one-round questionnaire administered to each household head or designate, with as many household adults present as possible. As a first round it is designed to precede all other sections, including (2) to (5). The themes covered include household-level productive assets, household demographic profile, parcel and farm plot inventory, family settlement history, household head's perception of specific land rights on the private plots of household members, land acquisition and disposal histories of plots alienated by household members, and general questions on the family's perceptions of land tenure security and land scarcity in the village.

- **Economic adult questionnaire**. A one-round questionnaire administered to each adult in the household who has either received remittances, is involved in wage and non-farm employment, has used credit or made withdrawals from local savings groups (*osusus*), or has been involved in one or more land disputes. The questionnaire follows round (1) but can be undertaken simultaneously with any of rounds (2) to (5). Information is elicited on remittances, wage and non-farm employment, non-farm income, credit use, credit sources, and land disputes.

- **Plot characteristics questionnaire**. For each household member having a plot of land rented-in, borrowed, purchased, received as a gift, claimed spontaneously, rented-out, given, loaned, or otherwise temporarily given to another, a one-round questionnaire is administered to that adult. The questionnaire follows round (1) but can be undertaken simultaneously with any of rounds (2) to (5). The themes covered include (for each plot) land quality, parcel acquisition history, fruit tree sales, terms and conditions of land rentals or sharecropping, plot-level investments in land improvements, and plot size measurements.

- **Plot manager questionnaire**. For each household member farming a plot (excluding plots rented-out, given-out, or pledged), detailed information is elicited (for each plot) on perceived land rights of the manager, input use and expenditures, input prices, production

value (aside from tree crops), land use and management practices, and labor utilization. The questionnaire follows round (1) but can be undertaken simultaneously with any of rounds (2) to (5).

- **Vegetable production questionnaire**. Vegetable harvesting occurs nearly continuously from February through April. Because of continuous harvesting, the dearth of information on vegetable marketing, and the study's focus on the horticultural sector, this round was designed to elicit detailed information on amounts harvested, sales, and choice of market for up to 10 vegetables. The questionnaire follows round (1), but is administered repeatedly as needed (usually 2-3 visits) during the harvesting period.

This set of questionnaires was designed with three objectives in mind: (a) the need to group questions by theme or topic to facilitate recall and continuity; (b) the need to address questions to those household members most knowledgeable about a specific activity; and (c) the need to keep the length of each round to 1.5 hours or less in length to minimize respondent fatigue and data errors. For example, with regard to (a), questions on household demographics and family settlement history can be asked to the household head with a fairly high degree of reliability. However, questions related to remittances, non-farm income, plot management, and land rights are best addressed to the individuals (male and female) involved.

A draft questionnaire was developed in the US based on information gained during earlier reconnaissance visits, but underwent at least 10 major revisions and field testing in all three sites before implementation. Ten of the best enumerators with previous experience on a University of Wisconsin project involving agricultural surveys were chosen for the study. A three-day training session provided researchers an opportunity to explain the research design and survey instruments while providing enumerators the opportunity to provide comments and suggestions. Enumerators, 3-4 in each village, were assigned on the basis of experience and language skills. One experienced chief enumerator was made responsible for overall coordination and management.

The questionnaires were written in English but interviews were held in either Mandinka or Wolof depending on the first language of the respondent. The enumerators were either fluent in both languages, or were assigned to households on the basis of first language spoken. Field testing took place the first week of March 1993, and, after final revisions, the survey was implemented over the remainder of March to the end of April 1993. Data entry forms were designed in Paradox, and data entry was carried out in The Gambia after approximately one week designing the data entry routines and another week spent on providing training in Paradox. Actual data entry began the last week of March and continued throughout May in The Gambia. However, due to data errors detected in initial statistical runs and spot checks, researchers were forced to reenter the data in Madison during July 1993.

CHAPTER 3

HOUSEHOLD SOCIOECONOMIC PROFILE

I. Introduction

This chapter provides an overview of settlement history, urbanization, and the household political economy as a backdrop for the land market analysis in later chapters. Data are presented and analyzed on household population characteristics, wealth, migration and settlement, farm structure, land access, and principal plot use for the three study villages and according to founding family status. The data clearly depict a continuum of rising land scarcity and disputes with urbanization. Also, the most rural households in the study area and founding families tend to be better educated, have higher foreign language skills, and have larger family sizes and larger land endowments than households in more metropolitan areas. Areas at the urban fringe are experiencing rapid settlement; households in these zones are experiencing considerable tenure insecurity stemming from landholding groups reclaiming land for gift or sale to newcomers.

II. Household Demographic Profile

Of the 120 households in the overall survey, 36 can trace their lineage to founding families in their respective villages, mostly in Pirang and Sanyang (table 3.1). Sinchu village contains few founding families, a function both of its urbanized setting and high rates of in-migration. Household heads are predominantly male, but less so in the well established village of Pirang with higher rates of members working or living away from the household, and more so in Sinchu village, which is the settling point for many new arrivals.

Family size according to the data in table 3.1 appears to be negatively associated with urbanization and positively associated with founding family status in the community. The mean number of family members declines from 11.7 persons in Sanyang (the most rural of the three villages) to 8.8 persons in Sinchu (the most urban). Social status, measured by whether a household belongs to one of the original founding families of the area, also appears to be influencing family size (11.6 persons versus 9.7 persons for non-founding families). The younger age of households in Sinchu is an important factor contributing to the smaller family size there. While the distribution of the male population is nearly equal among villages, the female population in Sinchu tends to be much younger than their rural counterparts (69.3 percent females < 25 years versus 62.2 percent in Pirang and 60.9 percent in Sanyang).

Theoretically, a male bias in migration to urban areas or in pursuit of non-farm employment would tend to polarize the age-sex profile of the household's resident population toward the young and the elderly. The data bear out this relationship. On average, 34.2 percent of households in the survey had one or more family members absent. Absentee rates were highest in Pirang (62.5 percent) and lowest in Sinchu (12.5 percent), while founding families had a higher rate of absenteeism than non-founding families (41.7 versus 31.0 percent). Pirang has the highest percentage of both males and females residing outside the household while Sinchu has the smallest

Table 3.1
Age and Sex Composition, 1993 Peri-Urban Household Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of households in sample	40	40	40	36	84	120
Number of males in sample	164	205	251	209	411	620
Number of females in sample	189	204	216	207	402	609
Founding family (% yes)	7.5	37.5	45.0	100.0	-	30.0
Sex of household head (% male)	97.6	85.0	92.5	86.1	94.1	91.7
Mean family size (persons):	8.8	10.2	11.7	11.6	9.7	10.2
Mean number of males (persons)	4.1	5.1	6.3	5.8	4.9	5.2
Percent males by age category (%):						
0-15 years	44.9	47.7	49.0	48.3	47.1	47.6
16-25 years	18.9	15.2	15.1	15.8	16.3	16.1
26-35 years	15.3	16.1	11.6	13.4	14.3	14.1
36-45 years	9.2	6.8	10.0	9.1	8.6	8.7
46-55 years	6.8	6.8	5.2	5.3	6.5	6.2
55+ years	4.9	7.4	9.1	8.1	7.1	7.4
Mean number of females (persons)	4.7	5.1	5.4	5.8	4.8	5.1
Percent females by age category (%):						
0-15 years	48.6	44.0	46.1	42.4	48.3	46.4
16-25 years	20.7	18.2	14.8	15.0	19.2	17.8
26-35 years	14.8	17.6	17.2	18.4	15.7	16.6
36-45 years	7.4	5.9	9.8	9.2	6.9	7.7
46-55 years	5.3	7.8	7.9	7.7	6.7	7.1
55+ years	3.2	6.5	4.2	7.3	3.1	4.5
Households with members absent (%)	12.5	62.5	27.5	41.7	31.0	34.2
Residents absent (% yes):						
Males	3.0	16.6	8.0	10.5	9.0	9.5
Females	2.1	8.8	4.2	6.3	4.5	5.1
Family	2.5	12.7	6.2	8.4	6.8	7.3

a. A '-' means zero or negligible.

percentage. Males in the 16-25 and 26-35 age categories experienced the highest rate of migration (table 3.2). Out-migration by females is less than that for males, and appears to be largely confined to the 16-25 year age category. The net result of these migration flows is clearly evident in table 3.1; the outmigration of young adults is creating a bi-polar population distribution in Pirang and Sanyang, while their settlement on the metropolitan periphery is lead to a younger household age and distribution in such villages as Sinchu.

Table 3.2
Residency and Plot Manager Status, 1993 Peri-Urban Household Survey, The Gambia

	Household Males	Household Females	Overall Family
Percent of category currently resident in household (% yes):			
0-15	95.6	95.4	95.5
16-25	79.0	88.0	83.7
26-35	75.9	98.0	87.8
36-45	96.3	95.7	96.0
46-55	94.7	100.0	97.5
56+	100.0	96.4	98.6
Percent of category who are currently agricultural plot managers (% yes):			
0-15	1.4	-	.7
16-25	8.0	29.6	19.2
26-35	17.2	57.4	38.8
36-45	68.5	70.2	69.3
46-55	71.1	72.1	71.6
56+	80.4	50.0	68.9

This gender bias in residency can partially be attributed to the purposeful timing of data collection to correspond to the off-season when work on field crop activity (in which men participate) is minimal, while vegetable production and marketing (in which women predominate) is at its peak. However, a number of other factors could potentially influence access to farm and non-farm sources of employment including human capital differences, language skills, access to resources, gender divisions of labor in the household, and differences in access to non-farm employment opportunities.

Data on the percentage of individuals who are plot managers are broken down by age group and gender in table 3.2. Land access, measured by whether an individual is a plot manager, is fairly equal among male and female categories for the age groups 0-15 and 36-55. A much higher percentage of females are agricultural plot managers in the 16-25 and 26-35 age groups, partially reflecting the higher percentage of males in these categories that reside away from the household.

Conversely, in the 56+ category, women tend to have fewer plots than men (50.0 versus 80.4 percent) as land borrowing and agricultural field work decline with age, and as males continue to exert their control over communal fields as titular household heads (roughly 85 percent and above are males among the various strata, table 3.1). Being a plot manager could reflect any number of phenomena: differences in human capital or language skills that limit women's employment opportunities in the marketplace; non-farm employment and the probability of finding work provide higher expected returns than agricultural employment (and men are more successful in obtaining the work); and/or the land market is sufficiently flexible to accommodate the needs of women who are unable to participate actively in formal wage employment. Attempts are made to sort out these factors in later chapters, but on the surface a high percentage of men in the 16-35 age categories tend to work outside the household while women in the same categories tend to stay at home to do the agricultural work.

Land access and non-farm employment opportunities could conceivably be inter-linked with ethnic origin (Lebanese traders, Fula herders)—a proxy for which is the native tongue of the household head (table 3.3). The vast majority of households are Mandinka, particularly in the villages of Pirang and Sanyang, followed by smaller numbers of Jolas. The vast majority of founding families are Mandinka (83.3 versus 41.7 percent), although the broad ethnic mix of households in the non-founding family strata would seem to imply that no strict divisions are separating ethnic groups in acquiring land. The ethnic mix of the population in Sinchu is best characterized as a "melting pot:" 32.5 percent Wolof, 27.5 percent Fula, 22.5 percent Mandinka, 5.0 percent Jola, and 12.5 percent other ethnic groups.

Table 3.3 also provides a breakdown of years of education for all males and females in the household. For the entire sample, an almost equal percentage of males and females completed primary education. However, a significant difference is evident at the level of secondary and technical education; 33.3 percent of all males versus 12.5 percent of females studied (but did not necessarily complete education) at this level. Also, both males and females in founding families are significantly better educated than their non-founding family counterparts at the level of secondary and technical education (47.2 versus 27.4 percent for males and 19.4 versus 9.5 percent for females) although a gender bias is still strongly evident within both categories.

English is the official language for government administration and services in Banjul. Government forms, school books, government pamphlets, and registration records are written in English. All billings, invoices, and receipts are handled in English as well. The ability to read and write English is necessary for engaging in commercial and legal activities, particularly those involving wage-employment and official channels. Overall, 49.2 percent of males reported a capacity to both read and speak in English versus 32.5 percent for women, although wide variations are evident. The more rural households of Pirang and Sanyang surprisingly exhibit the best command of English (although with a gender bias), while households in Sinchu at the edge of the urban area exhibit the lowest level of proficiency, again a reflection of the migrants from more rural

Table 3.3
Human Capital and Education, 1993 Peri-Urban Household Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of households in sample	40	40	40	36	84	120
Number of males in sample	164	205	251	209	411	620
Number of females in sample	189	204	216	207	402	609
Native tongue (household head):						
Mandinka	22.5	65.0	75.0	83.3	41.7	54.2
Fula	27.5	7.5	-	8.3	13.1	11.7
Jola	5.0	17.5	12.5	8.3	13.1	11.7
Wolof	32.5	-	-	-	15.5	10.8
Other	12.5	10.0	12.5	-	16.7	11.7
Male education (level achieved) (%):						
Partial schooling/Koranic	50.0	45.0	40.0	30.6	51.2	45.0
Primary education	27.5	10.0	25.0	22.2	20.2	20.8
Secondary/technical education	20.0	45.0	35.0	47.2	27.4	33.3
University	2.5	-	-	-	1.2	.8
Female education (highest level) (%):						
Partial schooling/Koranic	60.0	72.5	57.5	41.7	72.6	63.3
Primary education	30.0	12.5	30.0	38.9	17.9	24.2
Secondary/technical education	10.0	15.0	12.5	19.4	9.5	12.5
University	-	-	-	-	-	-
English language skills (% yes):						
Males: Speaking ability	-	2.5	2.5	5.6	-	1.7
Reading ability	2.5	10.0	10.0	5.6	8.3	7.5
Both	30.0	52.5	65.0	63.9	42.9	49.2
Females: Speaking ability	-	-	7.5	8.3	-	2.5
Reading ability	-	15.0	-	8.3	3.6	5.0
Both	22.5	32.5	42.5	58.3	21.4	32.5

a. A '-' means zero or negligible.

areas settling at the metropolitan periphery.[8] A comparison of data by founding family status reveals that much of the discrimination bias occurs in the households of non-founding families; the English proficiency of males (females) in founding family households is 63.9 percent (58.3 percent) compared with 42.9 percent (21.4 percent) in non-founding families.

In general, the peri-rural households of Pirang and Sanyang, and the founding families, tend to be better educated, have higher foreign language skills, exhibit tighter ethnic settlement, are older, and have larger family sizes than households in the immediate peri-urban area. Males tend to be better educated and possess better language skills than females.

III. Household Assets and Wealth

Data on various categories of wealth are presented in table 3.4 for productive assets, livestock holdings, household durables, and quality of residence. Land assets are dealt with shortly. Financial holdings theoretically have an important influence on wealth, particularly for households relying on non-farm employment or being located in near proximity to urban areas. However, no attempt was made to gather information on financial assets due to concerns expressed by experienced enumerators that any data collected would be highly unreliable.

Compared with other peri-urban areas examined (Roth et al. for Maputo, 1995), households have relatively few durable assets. Only 10.1 percent of households in the overall sample had a stove, and 3.3 percent a television. Although 85.0 percent of households had corrugate roofs, only 8.3 percent cement walls, and 37.5 percent a hand pump or an open well in the compound. As would be expected, households in Sinchu with the greatest urban influence (and to a lesser extent Pirang village) possess a greater number of consumer assets, homes made of cement, and access to public water stands.

With regard to productive assets, 20.0 percent of all households have a seeder, 18.3 percent a cart, 18.3 percent a bicycle, 8.3 percent a plow, and fewer than 2.5 percent either a motorcycle or car with little variation among strata. Given the heavy reliance of households on farming in Sanyang and to a lesser extent Pirang (chapter 4), these asset holdings appear low. Livestock holdings by households in Sinchu are mainly confined to small ruminants and pigs—animals that are well adapted to confinement rearing. Cattle are more important in Pirang (3.4 animals) and Sanyang (3.9 animals).

Physical assets of founding families stand out in one important regard—size of cattle holdings. Around 25.0 percent of founding family households are major owners of cattle herds in the village during the dry season and, as will be seen in chapter 6, possess considerable rights over where herds are tethered, and on which plots manure is applied. Moreover, compared with non-founding households, founding families on average held a greater number of cattle (5.4 versus 1.2 animals) and oxen (.4 versus .2 animals).

[8] In addition to the high frequency of settlement (roughly an eighth of households in the Sinchu sample) by individuals from the north bank and from up-country, a greater emphasis on Koranic education in Sinchu Alhaji (see annex A.2) was also an important contributing factor.

Table 3.4
Household Physical Assets, 1993 Peri-Urban Household Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of households	40	40	40	36	84	120
Household productive assets (% with):						
Seeder	20.0	12.5	27.5	16.7	21.4	20.0
Bicyle[c]	17.5	7.5	30.0	19.4	17.9	18.3
Cart	20.0	10.0	25.0	13.9	20.2	18.3
Plow[b]	-	15.0	10.0	11.1	7.1	8.3
Automobile[c]	5.0	-	2.5	2.8	2.4	2.5
Motorcycle[c]	5.0	-	-	-	2.4	1.7
Livestock holdings:						
Herd owner (% with)[d]	-	10.0	17.5	25.0	2.4	9.2
Livestock held (no.):						
Cattle	-	3.40	3.90	5.42	1.15	2.43
Goats	1.10	1.73	1.27	1.47	1.32	1.37
Sheep	.98	1.18	.57	1.06	.85	.91
Oxen	-	.28	.40	.36	.17	.23
Donkeys	.28	.05	.33	.08	.27	.22
Pigs	.33	-	.30	-	.30	.21
Horses	.10	-	.05	.06	.05	.05
Household durable assets (% households having):						
Stove	15.4	12.5	2.5	8.3	10.8	10.1
Television	10.0	-	-	-	4.8	3.3
Video	-	-	2.5	2.8	-	.8
Refrigerator	-	-	-	-	-	-
Residential characteristics (% with):						
Corrugate roof	85.0	95.0	75.0	88.9	88.3	85.0
Concrete or cement block walls	12.5	10.0	2.5	8.3	8.3	8.3
Hand pump or tap in compound	-	-	2.5	2.8	-	.8
Open well in compound	10.0	42.5	57.5	44.4	33.3	36.7
Open well in neighbors compound	12.5	22.5	25.0	19.4	20.2	20.0
Public stand or well	77.5	35.0	15.0	33.3	46.4	42.5

a. A '-' means zero or negligible.
b. Single or double mouldboard.
c. Either income earning asset or consumerable depending on principal use.
d. At least one household member is a major owner of a cattle herd present in the village during the dry season. A major holder of a herd exercises considerable rights concerning the fields upon which the herd is tethered—an important means of gaining access to manure for improving soil fertility.

The social status conferred on households of founding families and their greater holdings of land and livestock do not appear manifest in other forms of wealth. These findings can be attributed partially to the majority of founding families in the survey being located in Pirang and Sanyang villages (thus the urban influence of Sinchu on consumer assets upwardly biases the assets of non-founding families.) Nevertheless, any economic power that may be associated with landholdings are not strongly apparent in the accumulation of physical assets of non-livestock and financial assets.

IV. Migration and Settlement

Nineteen of the 120 households in the three villages moved to their current village location sometime in the previous 10 years. Of this number, over 73.7 percent settled in Sinchu. Data on rates of settlement in table 3.5 show that 35.0 percent of households in Sinchu had migrated there sometime in the previous 10 years, 5.0 percent in Pirang, and 7.5 percent in Sanyang. Founding families, as expected, have been relatively stationary, while 21.4 percent of non-founding households have recently immigrated to their current home villages.

The origin of settlers is nearly equally split between urban households that moved out to the peri-urban sites and the remainder that moved into the area from outlying rural areas. Of the 14 migrant families who settled in Sinchu village, 7 originated in Serekunda, 1 in Bundung, 1 in Busumbala, 1 in Sare Babu, and 1 in Sinchu Sori, all areas within the larger confines of the Banjul/Serekunda metropolitan area. The remainder were from more remote areas including Kobunay in Lower River division, and Fass Njaga Choi and Ngeyen Sanjal in North Bank division. Of the five migrant families moving into either Pirang or Sanyang, the majority migrated from areas outside the greater Banjul/Serekunda region: Berending in Kombo South (peri-urban), Marong Kunda Badibu in North Bank division, Banjul, Kwinella Kiang in Lower River division, and Santanto M.I.D. in McCarthy Island division. Twelve of these 19 households moved two or more times within the 10 year time frame.

What factors were instrumental in motivating the move? Wanting to occupy a house was the single most important reason (66.6 percent) reflecting largely the urban settlement characteristics of Sinchu village. Housing was followed, in declining order of importance, by employment (changing jobs) (9.5 percent), land for farming (9.5 percent), better access to utilities (4.8 percent), and other reasons (9.5 percent). However, for twelve of the 19 households that made two moves, employment was the most important reason for the first move (50.0 percent), followed by housing (16.7 percent), land for farming (16.7 percent), and other (16.7 percent).

Although the limited number of observations does not permit a rigorous statistical analysis of settlement processes, the data suggest a number of patterns. First, households tend to move into the urban areas of Banjul/Serekunda seeking employment, then later on a second move changed addresses to Sinchu Baliya on the edge of the city in search of land for housing and/or farming. Secondly, households in the immediate peri-urban area—Sinchu—were the most dynamic in terms of settlement, while founding families were most stable.

Table 3.5
Migration and Settlement, 1993 Peri-Urban Household Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of households	40	40	40	36	84	120
Families who have lived elsewhere in previous 10 years (%)	35.0	5.0	7.5	2.8	21.4	15.8
Number of motives given for [b] changing residence	13	3	5	1	20	21
Motive for changing residence to current address:						
Occupy own house	100.0	-	20.0	100.0	65.0	66.6
Employment related [c]	-	66.6	-	-	10.0	9.5
Land for farming	-	-	40.0	-	10.0	9.5
Other	-	-	40.0	-	10.0	9.5
Better access to utilities	-	33.3	-	-	5.0	4.8
Number of motives given for moving to former residence [b]	9	2	1	1	11	12
Motives for changing residence to former residence:						
Employment related [c]	66.7	-	-	-	54.5	50.0
Occupy own house	11.1	-	50.0	-	18.2	16.7
Land for farming	-	100.0	50.0	-	18.2	16.7
Other	22.2	-	-	100.0	9.1	16.7

a. A '-' means zero or negligible.
b. Some households gave no reason for moving while others gave two or more reasons.
c. Can mean either moving away from an area for lack of employment or to take on new employment.

V. Land Assets and Farm Structure

Farm holdings in the peri-urban area exhibit a high degree of fragmentation between uplands, lowlands (rice), and vegetables grown on lowlands and donor schemes; and between the private fields of individual family members in each agroecological regime, and the communal fields worked by all family members. In total, 8,268 different plots of land were managed by different family members in the three villages, 7,758 by women members of the family (mostly many small vegetable

plots), 376 by male members of the family, and 134 by borrowers.[9] Measuring the numerous small rice and private vegetable plots would have involved considerable time and effort, far beyond what resources would permit. The area of total rice and private garden plots was thus estimated in either of two ways: measuring the combined area of each (rice or private vegetable plots) if all were contiguous, or measuring a representative size plot for each if some are non-contiguous then multiplying the representative area by the total number of respective plots held. Areas associated with each respective calculation are hereafter referred to as corresponding to a "major plot" signifying that land areas of many dispersed plots have been consolidated.

Data on number of landholdings are reported in table 3.6 for four categories of land: land parcels excluding rice and vegetables, plots excluding rice and vegetables, rice plots, and vegetable plots. Excluding land in rice and vegetables, each household in the overall sample held 2.6 parcels on average, with the greatest number in Sanyang (3.0) and the fewest number in Sinchu (2.2). Households overall held 3.5 plots of land, with very little variation among villages or founding family status. Based on the simple division of parcels by plots, each parcel contains 1.4 plots of land. Each household on average also holds 1.2 rice plots, but more variation is evident among strata. No rice is produced in Sinchu, households in Pirang (a major rice growing area) held 2.4 plots, while Sanyang households held 1.1 plots on average. Vegetable plots are highly fragmented and dispersed among lowland areas and donor schemes. Each household on average in the overall sample farmed 63.9 different vegetable plots, with the greatest number in Sanyang (123.4) and the fewest in Sinchu (1.3).[10] Whereas in Sinchu, most vegetable cultivation is confined to small schemes, vegetables in Pirang and Sanyang are grown both on plots within schemes and on small plots dispersed throughout natural low-lying areas.

Very little difference is apparent in numbers of parcels and plots (excluding rice and vegetables) between founding and non-founding households. However, marked differences are apparent in holdings of land suitable for vegetables and rice—crops reflecting higher quality lowlands. Compared with non-founding family households, founding families held a greater number of rice plots (2.1 versus .8), and a greater number of vegetable plots (136.9 versus 32.6). This

[9] Following the terminology of Place and Roth (1994), a **holding** or **farm** is the aggregate of all parcels held by all family members within the household. It comprises one or more parcels acquired through inheritance, purchase, gift, marriage, rental, pledge, borrowing, or settled from unclaimed land. A **parcel**, the primary unit of land acquisition, is normally non-contiguous with other pieces of land held by the household, although it is possible that contiguous but separate parcels have been acquired to form a farm. A **plot** is distinguished by individual management rights to a piece of land within the parcel. The compound or household head, for example, may allocate one or more plots to household members for their private use while commanding family members to work on a separate plot for communal grain production and consumption. A **field** refers to distinct areas of land use, either a sole crop, intercrop, pasture, fallow, idle, or unused land. A parcel thus contains one or more plots and one or more fields. Two or more plots belonging to the same person cannot be contiguous within a parcel; two or more fields of the same crop cannot be contiguous within a plot.

[10] In effect, each plot manager is asked for the number of plots held that are planted in rice or vegetables (each separately). The number of plots is then multiplied by the area of a representative plot.

Table 3.6
Farm Structure, 1993 Peri-Urban Household Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Mean number of landholdings (including fallow and residential plots):						
Parcels (excluding veg/rice) (**A**)	2.2	2.6	3.0	2.9	2.5	2.6
Plots (excluding veg/rice) (**B**)	3.7	3.5	3.3	3.8	3.4	3.5
Rice plots (**C**)	-	2.4	1.1	2.1	.8	1.2
Vegetable plots (**D**)	1.3	67.1	123.4	136.9	32.2	63.9
Mean number of landholdings (excluding fallow and residential plots):[c]						
Parcels (excluding veg/rice) (**E**)	2.1	1.5	1.7	1.5	1.9	1.8
Plots (excluding veg/rice) (**F**)	2.8	2.1	1.9	2.1	2.3	2.2
Rice plots (**G**)[b]	-	2.4	1.1	2.1	.8	1.2
Vegetable plots (**H**)[b]	1.3	67.1	123.4	136.9	32.6	64.4
Mean parcel and plot size (ha):[c]						
Mean parcel size excl veg/rice (**I**)	.45	.91	1.07	1.14	.65	.77
Mean plot size excl veg/rice (**J**)	.34	.63	.98	.78	.53	.60
Farm area (ha):[c]						
Non veg/rice farming area (**K=ExI**)	.94	1.32	1.82	1.71	1.20	1.35
Rice area (**L**)[d]	-	.08	.19	.14	.08	.11
Vegetable area (**M**)[d,e]	.01	.03	.14	.06	.07	.07
Total farm area (**N=K+L+M**)	.95	1.43	2.15	1.91	1.35	1.53
Land/resident ratio (**N**/resident)	.11	.14	.18	.17	.14	.15

a. A '-' means zero or negligible.

b. Excluding fallow and residential plots reduces the number of households upon which statistical means are based, thereby changing the mean number of rice and vegetable plots.

c. Excludes residential, fallow, and uncultivated parcels and plots for which no area measurements were taken. Households generally hold numerous small plots of vegetables and rice that are non-contiguous and highly dispersed, thus the reason for treating them separately from other cropped areas.

d. Measuring the numerous small rice and private vegetable plots held by each household would have involved considerable time and effort. Instead, the area of total rice and private garden plots, respectively, was estimated in either of two ways: measuring the combined area of each (rice or private vegetable plots) if all are contiguous, or measuring a representative size plot for each if some are non-contiguous, then multiplying the representative area by the total number of respective plots held.

e. Vegetable beds on donor schemes are generally of uniform length and width. Measurements were taken of the length and width of an average bed, and the number of beds held by each manager within the household from which areas were calculated.

difference, as will be seen shortly, applies to both private gardens and donor schemes, implying that founding families, while giving land to donors for schemes, are also ensuring that access is retained by founding family members.

The second set of data on number of holdings in table 3.6 excludes fallow and residential plots, which enumerators were instructed not to measure. Land in fallow because of bush and trees would have been very difficult to survey. Measurement of a compound plot was not carried out if it did not contain cultivated land; otherwise compounds in villages tend to have fairly uniform dimensions, roughly 30x30 meters to 30x50 meters, that helped in area estimations. Data in table 3.5 show that the number of parcels in Pirang declines from 2.6 to 1.5, and in Sanyang from 3.0 to 1.7, once fallowed and residential plots are excluded. In Sinchu, however, the number of parcels declines from only 2.2 to 2.1, indicating that plots are being used for mixed residential and agricultural uses.

Spatial and political effects of landownership are also revealed in land sizes. Parcels (excluding rice and vegetables) average .77 ha in size for the overall sample. Parcels in Sanyang are largest in size (1.07 ha) and smallest in Sinchu (.45 ha). Parcels held by founding families (1.14 ha) are nearly twice as large as those held by non-founding families (.65 ha).

The effect of both larger number of parcels and larger sizes are evident in the larger sizes of farming units in Sanyang. The average size of farming unit (including upland areas, rice, and vegetables) in Sanyang is 2.15 ha compared with .95 ha in Sinchu. Founding families on average controlled 1.91 ha versus 1.35 ha for non-founding families. Had fallow land been included as well (table 3.9), this difference would have been even greater. Overall, founding families have larger sizes of farming units as well as a greater area of quality land suitable for rice and vegetables. As expected, a decline in both the number and size of parcels tends to occur as one moves along the continuum from land abundant Sanyang to land scarce Sinchu.

VI. Land Access and Tenure Perceptions

In addition to questions about landholdings, the household head and adults present at the first household level interview were asked a series of questions about land scarcity, tenure security and land conflicts in their village, to further evaluate land tenure perceptions in the study area. Results are tabulated in table 3.7. Households in Sanyang generally felt (87.5 percent) that land for cultivation was still relatively easy to acquire in the village. However, 65.0 percent (12.5 percent) of respondents in Pirang felt that land was difficult (or very difficult) to acquire, while 80.0 percent of households in Sinchu felt that land was very difficult to acquire. The majority of households, regardless of village, believe the best mechanism for acquiring additional land is borrowing it from other households with a surplus. Aside from borrowing and gifts from the *alkalo*, a small number of households felt that commercial transactions (purchase and renting) would be the next most effective means. The traditional role of the *alkalo* in providing (giving or lending) land has waned considerably in Sinchu and Pirang where land scarcity has emerged. Yet in Sanyang, 37.5 percent of households would still consider a gift of land from the *alkalo* as the most likely way to acquire additional farm land.

Regardless of appearances that land scarcity is emerging, disputes are relatively infrequent. Only two households (1.7 percent) in the sample reported ever having had a dispute over land. However, "land disputes" is a difficult concept to apply in the study area. As indicated in annex A, the *alkalos* feel compelled to assist outsiders in finding land, and may even profit from it. However, once all the idle family land is occupied, the *alkalo* has no recourse but to ask tenants (generally those with larger compounds or with idle land) to give a portion back, even if they had borrowed the land for decades. Respondents in each village were asked whether the *alkalo* could repossess part of their land even after improvements had been made. Respondents in Sanyang and Pirang generally felt that the *alkalo* could not or would not repossess the land. However, in Sinchu at the urban fringe where the land market is dynamic and settlement is occurring at a rapid pace, 45.0 percent of households believe the *alkalo* could take back land even if trees had been planted, and 25.0 percent believe repossession is possible even if a building had been constructed on the property.[11] Repossession in these cases may not constitute a "dispute" in the legal sense, but the practical effect is that tenure security is compromised.

The larger philosophical question remains—what constitutes rights of ownership or transfer. Should the heritage of founding family status and lending-out land to borrowing families on concessionary terms confer upon founding families the right of repossession? Conversely, for borrowing families who with exception of the traditional kola nut tribute (see annex A) have not paid rents over the years, to what property rights should they be entitled? The current system whereby the *alkalo* perceives the right to reallocate customary lands places current borrowers in a precarious situation. A significant number of current tenants in Sinchu, who after receiving past allocations and perhaps feeling that land access had been assured, may one day find a portion of their land repossessed by the *alkalo*. These same processes are at play in Pirang and Sanyang, but problems are not yet perceived on a wide scale due to the relative abundance of land in these villages. Unfortunately, borrowing families who have been successful in acquiring access to land through customary mechanisms operate in trust that traditions will prevail. However, with the emergence of land scarcity, borrowing families may witness a period where the *alkalo* alienates land to villagers to accommodate population growth or to profit from outsiders with money. As land scarcity tightens, they may be approached to give up "unused" land. The reserve of village land upon which they may have been depending for future inheritances thus experiences rapid decline. Finally, borrowers must inevitably pay a higher price through purchase or rental to secure land in the village, or relocate elsewhere to sustain a living (see chapter 5).

[11] Some of the land allocated by the *alkalo* in Sinchu Alhaji is expressly granted for residential purposes. As with leased properties in Banjul/Serekunda, the planting of trees does not guarantee one's continued occupation of the land. Furthermore, once granted, the premises must be properly fenced and the buildings constructed thereon must meet minimum standards for the lease agreement to remain in force.

Table 3.7
Perceptions on Land Access and Land Conflicts, 1993 Peri-Urban Household Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Land easy or difficult to acquire:						
Easy	7.5	22.5	87.5	58.3	31.0	39.2
Difficult	12.5	65.0	12.5	30.6	29.8	30.0
Very difficult	80.0	12.5	-	11.1	39.3	30.8
Best means of acquiring new land:						
Borrow	87.5	77.5	60.0	66.7	78.6	75.0
Gift from *alkalo*/*kabilo* head	2.5	5.0	37.5	19.4	13.1	15.0
Purchase from *alkalo*/*kabilo* head	7.5	2.5	2.5	-	6.0	4.2
Rent-in	2.5	10.0	-	13.9	-	4.2
Other	-	5.0	-	-	2.4	1.7
Land disputes now a serious problem (% yes):						
Ownership disputes	5.1	-	-	2.8	1.2	1.7
Boundary disputes	-	-	-	-	-	0
Repossession of land by *alkalo* possible even after having made the following improvements (% yes):[b]						
Planted trees	45.0	-	2.5	-	22.6	15.8
Buildings	25.0	-	-	-	11.9	8.3
Risk of losing land if rented-out for **one** cropping season only:						
No risk	95.0	92.5	97.5	97.2	94.0	95.0
Some risk	2.5	-	-	-	1.2	.8
No opinion	2.5	7.5	2.5	2.8	4.8	4.2
Risk of losing land if rented-out for **five** or more cropping seasons						
No risk	92.5	57.5	97.5	77.8	84.5	82.5
Some risk	5.0	27.5	-	13.9	9.5	10.8
Much risk	-	7.5	-	5.6	1.2	2.5
No opinion	2.5	7.5	2.5	2.8	4.8	4.2
Enough grain produced to feed family throughout year (% yes)	2.5	7.5	5.1	11.1	2.4	5.0

a. A '-' means zero or negligible.
b. Respondent was asked whether the *alkalo* of the village could take back land given to the family even after investments in buildings or trees had been made since acquisition.

It is in periods of uncertainty, where the beginnings of a commercial market may act to permanently alienate land from the founding families through purchase, that current tenants experience the greatest tenure insecurity. Alternatively, families may turn to renting-in land to preserve their land endowments, or to renting-out land to those who find their allocations reduced. Respondents in all villages were asked to rank the risk of renting out land on a scale from "no risk" to "much risk" for two different rental periods—one cropping season and five cropping seasons—to evaluate whether expected loss is related to rental period. Regardless of the village, households generally perceive no risk to renting-out land for periods of one cropping season or less. However, in Pirang, 27.5 percent of respondents felt that some risk was involved in longer-term borrowings, and 7.5 percent felt that considerable risk was involved.[12] With regard to founding families, land appears to be relatively easier to acquire (58.3 versus 31.0 percent), and most would either borrow, seek more land from the *alkalo* or *kabilo* head, or rent-in additional land. Repossession of land does not appear to be a genuine concern, but a slightly higher risk is perceived from renting-out land for longer-time periods.

Land tenure insecurity is exacerbated by, or perhaps driven by, the fact that very few strata are self-sufficient in food production. Even for founding families who possess higher land endowments and the ability to command outside labor in exchange for land (seen shortly), only 11.1 percent of households produce enough grain to feed the entire family through the entire year.

In addition to the above questions about land access, adults attending the household-level interview were asked to rank the most serious problems faced by farmers in the village with respect to plot ownership. Their responses are tabulated in table 3.8. Of the 120 households in the sample, 42 responded (2 with multiple responses), and the vast majority of these (36) were in Sinchu village. Problems related to land shortages were the most frequently cited, including: the *alkalo* evicting people from farmlands and giving or selling it to newcomers for dwellings, insufficient land for farming in the vicinity of the village, and fear of eviction. Another four households mentioned disputes, while seven households mentioned difficulties in acquiring implements, draft power, and farm inputs. These general perceptions are consistent with earlier data showing high rates of eviction, residential settlement, and land scarcity in Sinchu, and the general lack thereof in Pirang and Sanyang villages.

[12] It is not clear why higher rates of tenure insecurity were not apparent in Sinchu. It is possible that the greater authority of the *alkalo* in monitoring land claims, and enforcing land rentals, also conferred a greater a sense of tenure security against claims by renters/borrowers. Also, few of the founding families, who perceive the highest risk of land loss with longer-term rentals, live in Sinchu.

Table 3.8
Principal Land Problems, 1993 Peri-Urban Household Survey, The Gambia

	Sinchu	Pirang	Sanyang
Land shortage:			
People evicted from farmlands by *alkalo* and given to new settlers	9		
Shortage of farm land or have no permanent farm land	5	2	1
Not enough land	5		
Difficult to get farm land because of growth in village	2	1	
Farmland being converted to dwellings, or household members are not farmers	2		
Land must be obtained from neighboring village due to land shortage	2		
Fear eviction if rent not paid or plot not used	1		
Land disputes:			
Between respondent and neighbor			1
Women tried to claim land occupied by respondent			1
Two people were lent the same plot			1
Two people claim buying the same plot	1		
Lack of farm inputs:			
Lack of implements	3		
Lack of draft power	4		
Farm inputs are not available	2		1

VII. Tenure Status and Principal Land Use

A. Tenure Status

Principal tenure status and land use based on **major** plot holdings are reported in table 3.9, and in table 3.10 by household members and according to type of landownership (plots of the household head versus individual family members, male versus female managed plots, and private versus communal holdings). Major plots in the context of upland crops and the compound assume the conventional plot definition. However, in the context of rice and vegetable areas, a major plot for rice or vegetables includes the numerous “minor” plots of each crop respectively held by a plot manager. (Note, a household may still hold multiple major plots of rice and vegetables depending on the number of managers within the household.)

Table 3.9
Tenure Status and Principal Land Use by Village and Founding Family Category, 1993 Peri-Urban Household Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of major plots	153	313	246	289	423	712
Current status of family landholdings (% plots):						
Held and managed by family	52.9	56.2	66.3	62.6	56.5	59.0
Borrowed-in	36.6	34.2	33.7	28.4	38.8	34.6
Lent-out[b]	.7	9.3	-	7.6	1.9	4.2
Entrusted[c]	9.8	-	-	1.4	2.6	2.1
Rented-in	-	.3	-	-	.2	.1
Principal Land Use (% of plots):						
Private garden (vegetables)	.7	24.0	22.8	21.5	16.5	18.5
Rice	-	25.9	18.3	22.8	14.2	17.7
Buildings or residence	25.5	9.9	17.1	12.5	18.0	15.7
Groundnut	32.0	9.9	5.7	8.0	16.8	13.2
Millet	7.8	9.9	10.6	10.0	9.5	9.7
Fallow	1.3	8.3	6.9	8.3	5.0	6.3
Maize	21.6	1.3	2.0	1.7	8.7	5.9
Donor garden (vegetables)	2.0	6.1	4.9	8.3	2.4	4.8
Cassava	7.2	1.3	6.9	3.1	5.4	4.5
Fruit orchards	.7	2.2	2.8	2.4	1.9	2.1
Uncultivated	-	1.0	1.6	1.0	.9	1.0
Sorghum	1.3	.3	.4	.3	.7	.6
Communal or individual tenure (%): [d]						
Communal	71.2	55.6	75.6	63.3	67.6	65.9
Individual	27.5	44.1	23.2	36.3	31.2	33.3
Uncertain	1.3	.3	1.2	.3	1.1	.8

a. A '-' means zero or negligible.
b. "Borrowed-out" in local languages.
c. "Entrusted" means that the land is entrusted to the current landholder but the land belongs to that person who is entrusting the land and who has the right to take back the parcel at any time. The distinction between entrusting and lending-out land centers on who initiates the transfer (entrusting by the "giver" and lending by the borrower).
d. Communal fields are worked collectively by all household members under the supervision of the household head and produce is shared by all (generally grain fields). Individual fields are privately managed by individual household members.

Table 3.10
Tenure Status and Principal Land Use by Gender and Landholding Category, 1993 Peri-Urban Household Survey, The Gambia [a]

	House-hold Head	Other house-hold members	House-hold Females	House-hold Males	Com-munal Plots	Indiv-idual Plots
Number of major plots	345	367	338	345	469	237
Current status of family land holdings (% plots):						
Held and managed by family	80.6	38.7	47.0	75.7	67.0	42.6
Lent-out[b]	.3	7.9	.3	.3	4.7	3.4
Borrowed-in	15.9	52.0	51.5	20.6	26.9	50.2
Rented-in	.3	-	-	.3	.2	-
Entrusted[c]	2.9	1.4	1.2	3.2	1.3	3.8
Principal Land Use (% of plots):						
Maize	11.0	1.1	.6	11.3	8.1	1.7
Millet	12.8	6.8	1.2	15.7	13.4	2.5
Sorghum	.6	.5	-	1.2	.6	.4
Rice	4.3	30.2	37.0	-	23.0	6.8
Groundnut	13.9	12.5	6.8	17.1	10.9	18.1
Cassava	8.1	1.1	.6	8.7	6.2	1.3
Private garden (vegetables)	3.8	32.4	36.1	2.3	3.6	48.5
Donor garden (vegetables)	.9	8.4	9.5	.3	2.1	10.1
Fruit orchards	4.3	-	.3	4.1	2.3	1.7
Uncultivated	1.4	.5	-	2.0	1.1	.4
Fallow	7.5	5.2	5.3	7.5	6.0	6.8
Buildings or residence	31.3	1.1	2.7	29.9	22.6	1.7
Communal or individual tenure (%): [d]						
Communal	86.2	47.9	44.3	87.1	100.0	-
Individual	13.8	52.1	55.7	12.9	-	100.0

a. A '-' means zero or negligible.
b. "Borrowed-out" in local languages.
c. "Entrusted" means that the land is entrusted to the current landholder but the land belongs to that person who is entrusting the land and who has the right to take the parcel back at any time. The distinction between entrusting and lending-out land centers on who initiates the transfer (entrusting by the "giver" and lending by the borrower).
d. Communal fields are worked collectively by all household members under the supervision of the household head and produce is shared by all (generally grain fields). Individual fields are privately managed by individual household members.

Over one-third (34.6 percent) of all plots under management in the overall sample are borrowed-in by family members. A much lower percentage is reported as borrowed-out (4.2 percent). If lenders and borrowers were located in the same village, one would expect these two percentages to be roughly identical. The divergence can be attributed to a number of possible explanations: landholding groups reside outside the village boundaries surveyed, the landholding groups are absentee, and/or (the most likely explanation) much of the borrowed land has been lent out for so long that the founding families simply neglected to report their number (see chapter 5 for more details on mode and date of acquisition).

Another 2.1 percent of land was "entrusted," meaning that land is entrusted to the current landholder. The distinction between entrusting and lending-out centers on who initiates the transfer (entrusting originates with the lender while borrowing originates with the borrower). The remainder of the plots (59.0 percent) in the overall sample are held and managed by the family (details on mode of acquisition for these plots held are elaborated on in chapter 5). Entrusting is more common in Sinchu where individuals have acquired land and usually have started construction on a compound, but may entrust the land to a relative to guard the property in his or her absence. Borrowing-out is more common in Pirang. No borrowing is reported in Sanyang for the reasons stated above, although it is possible that enumerators simply neglected to include these plots in the survey.

Most of the plots held by the household head (80.6 percent) are household lands acquired through various modes of acquisition excluding borrowing or renting, and the majority (86.2 percent) are communal land on which the compound is located, or upon which the household's supply of grain is produced (table 3.10). Only 13.8 percent are the household head's private plots which s/he uses for personal profit, including all the orchards in the sample. Private plots of individual family members tend to be borrowed-in (52.0 percent) or allocated by the household head (38.7 percent). Women within the household (mainly non-household heads) rely heavily on borrowing (51.5 percent) and household allocations (47.0 percent), while males (including household heads) tend to rely less on borrowing (20.6 percent) and more on allocations by the household head (75.7 percent).

B. Principal Land Use

Land use information in tables 3.9 and 3.10 are based on principal land use of the plot. They differ from the area-based estimates reported later in chapter 6; the former give greater weight to small and numerous holdings (compound plots and private fields), while the latter give greater weight to land uses (that is, grains) that occupy an extensive area. Of the total number of 712 major plots studied, 15.7 percent are principally used for buildings or place of residence, 1.0 percent are uncultivated, and 6.3 percent are in fallow. As expected, the greatest proportion of fallow land is located in Pirang (8.3 percent) and Sanyang (6.9 percent) with little reserved in Sinchu.

Rice cultivation constitutes the principal land use in 17.7 percent of all plots, with the greatest representation in Pirang (25.9 percent) and of plots held by founding families (22.8 percent). Groundnuts represent 13.2 percent of all plot holdings and are mainly concentrated in the sandier soils around Sinchu (32.0 percent). Maize is grown on 5.9 percent of all plots but, like

groundnuts, is a dominant land use in Sinchu (21.6 percent). Millet is grown on 9.7 percent of all plots, and sorghum 0.6 percent, with very little variation among strata. Cassava is grown on 4.5 percent of all plots, with the highest proportions existing in Sinchu (7.2 percent) and Sanyang (6.9 percent). Plots held by the household head, largely communal fields, tend to be used for the family compound or cultivated in grains. Communal fields tend to be cultivated in grains and groundnuts, while individual plots tend to be cultivated in groundnuts, rice, or vegetables.

With regard to horticultural crops, around 18.5 percent of all plots in the sample are private gardens; the highest levels are reported in Pirang (24.0 percent) and Sanyang (22.8 percent), and the lowest in Sinchu (.7 percent). Access to donor schemes (compared with private vegetable plots) is less frequent in all survey regions: 4.8 percent of all plots are located on donor vegetable schemes with a high of 6.1 percent in Pirang and only 2.0 percent in Sinchu. Fruit orchards represent only 2.1 percent of all plots, but this figure underestimates the importance of tree crops, as many trees are located in the family compound while others are dispersed throughout the cropped area. Access of founding families to lowlands for private gardens is only marginally greater than for non-founding families (21.5 versus 16.5 percent), however their access to donor schemes is nearly four times greater (8.3 versus 2.4 percent). Most of the benefits of vegetable production accrue to women; compared with male landholdings, plots of female family members tend to be concentrated on production of rice (37.0 versus 0 percent), private garden vegetables (36.1 versus 2.3 percent), and production of vegetables on donor schemes (9.5 versus .3 percent).

CHAPTER 4

REMITTANCES, NON-FARM EMPLOYMENT, AND AGGREGATE INCOME

I. Introduction

Households in the peri-urban economy derive their income from multiple sources including formal wage-employment, self-employment, remittances from family and non-family members outside the household, and farming. This chapter analyzes income generating activities for each of the three study villages, by founding family status, and for the overall sample. Detailed information on farm inputs, outputs, and income at the plot level are dealt with in chapter 6. The net farm income data in this chapter are summed over plots and plot managers within the household to calculate household level income for five groups of activities—fruit sales (non-orchard), orchard production, upland crops, rice, and vegetables—to demonstrate the importance of different land uses to household income, and to draw attention to the significance of horticultural activities within the overall structure of household earnings. Gender disaggregated data on wage- and self-employment are also presented and analyzed including types and numbers of jobs, wage rates, earnings, and non-monetary benefits. The analysis shows that the majority of total household income is derived from wage- and self-employment activity even in the most rural of villages. Production of horticultural crops generate 2-11 percent of household income, depending on the village, while vegetable trading provides additional self-employment income, particularly for women.

II. Remittances

Remittances represent an important mechanism for intra-household transferences of income and wealth. Exchanges of cash and in-kind gifts for weddings, funerals, festivals and special events act to form and strengthen individual and family bonds within the community, strengthen alliances through inter-marriages, and develop (in the case of newcomers) or reinforce allegiances with political elites within the community.

Each adult in the household was asked for the level of cash and in-kind remittances s/he received during the course of the previous year.[13] Enumerators were specifically instructed to ask about part-year residents or non-family members that might normally escape reporting. Only a remittance in excess of D250/transaction (cash or value of in-kind transaction) was recorded. It was known a priori that excluding smaller transactions would underestimate the level of intra-household income transfers occurring, but inquiring about smaller exchanges would have risked overburdening the respondent. For each transaction in excess of D250, the respondent was further queried about the gender, residency status, location, and occupation of the sender, and description of the goods if the transaction was in-kind. Results are tabulated in table 4.1.

[13] Questions regarding remittances, wage-employment, and self-employment were asked directly to each adult within the household, without the household head or other adults being present, to ensure anonymity and confidence.

Table 4.1
In-Coming and Out-Going Remittances, 1993 Peri-Urban Household Survey, The Gambia [a,b]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Percent of households receiving remittances (%)	20.0	37.5	7.5	25.0	20.2	21.7
Number of remittances received	11	35	3	26	23	49
Gender of sender (% of remittances):						
Male	81.8	94.3	100.0	96.2	87.0	91.8
Female	18.2	5.7	-	3.8	13.0	8.2
Family status of sender (% of value):						
Household member	9.1	62.9	66.7	61.5	39.1	51.0
Non-household member	90.9	37.1	33.3	38.5	60.9	49.0
Current residence of sender (%):						
Greater Banjul	36.4	31.4	-	30.8	30.4	30.6
Elsewhere in Gambia	9.1	14.3	66.7	7.7	26.1	16.3
Senegal	9.1	-	-	-	4.3	2.0
Elsewhere (further specify)	45.4	54.3	33.3	61.5	39.1	51.0
Mean value of cash and in-kind remittances per transaction (D/hh) [c]	399.1	1,095.4	266.7	1,175.8	563.5	888.4

a. A '-' means zero or negligible.
b. Only remittances in excess of 250 dalasis (in-cash or in-kind) or US$30 (US$1.00=D8.30 in 1992-93) in the p year were recorded to minimize demands for data recall. Receipt of only one bag of rice valued at about D150 would normally be excluded, however receipt of multiple bags of rice should have been included. Remittance value thus probably exclude many small transactions taking place among households within the year.
c. Per-transaction remitted.

Of the 120 households in the overall sample, 21.7 percent received some form of cash and in-kind remittances in the previous year, including 49 total remittances (multiple remittances were reported for certain households). Pirang village reported the highest level of remittances and Sanyang the lowest. Founding family status appears to have no major influence on the frequency of remittances. The vast majority of remittances were remitted by males mostly residing outside The Gambia or Senegal (51.0 percent). Another 30.6 percent came from individuals residing in the vicinity of Greater Banjul, and 16.3 percent from elsewhere in The Gambia. The population of remitters was nearly evenly split between household and non-household members, although the

percentage of household members would have been much greater if households in Sinchu village were eliminated (62.9 percent in Pirang and 66.7 percent in Sanyang).[14]

Curiously, about one-half of the remittances in the overall sample were sent by non-household members, although the narrow definition of household used in this study should in principle have excluded close kin or the wife's family in the case of a married spouse.[15] Unfortunately, relation of the remitter to the household member receiving the remittance was not asked. The occupation of some (8) remitters was not known; of the remaining, business (15) tended to predominate, followed by civil service (6), tailoring (4), NTC or GAMTEL (3), mechanic, student and teaching (each 2), and FAO office, farming, marabout, gardening, paymaster, security guard, or sponsor (each 1). Of the 49 transactions, 25 were in the form of cash, and the remainder were rice,[16] cloth or clothing, jewelry, electronic goods, or sheep. As few as 1 bag and as many as 12 bags of rice were remitted. Oddly, most of the remittances of rice (9 of the 12 cases) were received in Pirang, the principal rice growing area.

III. Non-Farm Employment

Despite the rural character of life and the importance of farming in two of the three study villages, the vast majority of households have members engaged in activities outside primary agricultural production. The importance of non-farm employment can partially be attributed to the ebb in agricultural activity during the dry season when the productivity of labor is low. But as will be seen shortly, many wage- and self-employment activities are held for 6 to 12 months in
duration, implying a fairly high degree of non-farm involvement throughout the year.

Various indicators of non-farm employment are presented in table 4.2. On average, for the overall sample, 40.8 percent of survey households have one or more members who hold a wage- or salaried-job, and 57.5 percent have members who are engaged in one or more self-employed activities. To the extent that each working member in the household holds one and only one wage- or self-employment job respectively, then the number of jobs/household and number of persons employed/household ought to be identical. On average, there are .54 (.49) wage-jobs (persons employed) and .80 (.77) self-employment activities per household, indicating only a modest degree of multiple jobs per adult employed on average.[17]

These data, however, are marked by wide regional variations. As expected, rates of wage-employment and self-employment are highest on the urban fringe (57.5 and 80.0 percent respectively in Sinchu versus 25.0 and 37.5 percent in Sanyang). Moreover, Sinchu has the highest

[14] The lower percentage for non-founding families (39.1 percent versus 61.5 percent) is picking up the effect of Sinchu village in which only 7.5 percent of households are founding families versus 37.5 percent in Pirang and 45.0 percent in Sanyang (table 3.1).

[15] A household is defined as all members who pool their resources in production, share in the output, and were resident for at least 6 months during the previous year.

[16] Rice is perhaps the most common commodity given, although the recipient may convert it to cash.

[17] Nonetheless, the same individual may hold a salaried job while being engaged in another self-employment activity.

number of self-employment jobs and number of persons employed. While Sinchu village has the highest frequency of non-farm employment, households in Pirang exhibit a greater degree of multiple jobs per working adult. Founding families appear to have better access to wage-employment (.61 versus .51 jobs and .59 versus .45 working persons), while non-founding families seem to be placing greater emphasis on self-employment activities (.87 versus .64 jobs and .82 versus .64 persons).

Table 4.2
Non-Farm Employment Activities, 1993 Peri-Urban Household Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
No. households in sample	40	40	40	36	84	120
Percent of households with (% yes):[b]						
Wage-employment	57.5	40.0	25.0	36.1	42.9	40.8
Self-employment	80.0	55.0	37.5	52.8	59.5	57.7
Number of jobs per household:						
Wage-employment	.40	.78	.45	.61	.51	.54
Self-employment	1.20	.73	.48	.64	.87	.80
Number of persons employed per household:						
Wage-employment	.40	.65	.43	.59	.45	.49
Self-employment	1.15	.67	.48	.64	.82	.77

a. A '-' means zero or negligible.
b. At least one family member in household is employed in wage- or self-employment activities.

Individual types of wage- and self-employment activities are aggregated in table 4.3 into six sectors of employment: teaching; construction and trades; services; fishing, livestock husbandry, and agriculture; military and civil service; and commerce.[18] Of the 65 (96) wage-employment (self-employment) jobs worked by households in the sample, 9 (-) involve teaching, 14 (31) involve either construction or trades, 26 (15) are associated with services, 9 (12) are related to agriculture, 5 (-) are salaried jobs in the military or civil service, and 2 (38) involve business or commercial activities. Overlap is sometimes apparent, as in the case of masons in which 5 jobs involved wage-employment and 8 self-employment. While generalizations are somewhat difficult to make, teaching, services, and civil service jobs tend to be dominated by salaried employment, while construction, trades and business tend to be dominated by self-employment.

[18] Types of individual wage- and self-employment activities were first enumerated in the survey, then the six categories were chosen, and individual activities were grouped, by researchers.

Table 4.3
Type of Activities by Industry Group and Type of Employment, 1993 Peri-Urban Household Survey, The Gambia [a,b]

Type of Self- and Wage-Employment	Number of Wage-Employment Jobs (No.)	Number of Self-Employment Jobs (No.)
Teaching:	9	-
Arabic teacher	1	-
Teacher	8	-
Construction/trades:	14	31
Blacksmith	-	2
Blockmaker	1	3
Brickmaker	-	1
Carpenter	-	5
Fitter	-	1
Foreman	1	1
Hay seller	-	1
Iron bending or plating	2	-
Laborer (general)	4	1
Seivemaker	-	2
Mason	5	8
Motor mechanic	-	1
Tailor	-	2
Tyermaker	-	1
Welder	1	2
Service sectors:	26	15
Badge messenger	1	-
Board member	1	-
Donkey/horse operator	-	4
Driver, driver/foreman, taxi driver	4	2
Duty man	1	-
Health worker	1	-
Hotel worker	1	-
House cleaner	1	-
Kitchen helper	2	-
Marabout	-	9
Orderly	1	-
Security guard/watchman	10	-
Time keeper	1	-
Waiter	1	-
Weighing clerk	1	-

(continued)

Table 4.3
Continued: Employment Activities [a,b]

Type of Self- and Wage-Employment	Number of Wage-Employment Jobs (No.)	Number of Self-Employment Jobs (No.)
Fishing/husbandry/agriculture:	9	12
Animal herder	1	1
Fishing or shrimp fishing	7	11
Watering	1	-
Military/civil service:	5	-
Forest guard	1	-
Policeman	1	-
Serviceman/soldier	3	-
Commerce:	2	38
Business	-	2
Buying and selling (general)	-	2
Buying and selling shrimp	-	1
Firewood seller	-	2
Fish monger	-	2
Palmwine tapper and seller	-	2
Petty trader	1	18
Retail trader	-	2
Shopkeeper	-	2
Small business owner	-	2
Store clerk	1	-
Timber seller	-	1
Wine seller	-	2

a. Activities are actual job descriptions reported by workers. The employment categories in boldface are classifications designed by researchers to summarize the data after data collection was completed.

b. Eleven of the 161 total jobs were performed in conjunction with commercial farm employment: Arabic teaching (1), fishing (2), hotel worker (1), house cleaner (1), mason (1), military or security guard (4), and watering (1). Nine were salaried employees and 2 involved self-employment.

The impact of medium- and large-scale commercial farms on labor absorption and employment is an important policy concern of the government and donors. Horticultural crops, being relatively labor intensive, combined with the perceived scale efficiencies of larger firms in the marketing of vegetables and access to credit, would theoretically support labor hirings by such firms in vegetable production and marketing. Commercial farms are located in the proximity of all three survey villages, albeit they are relatively few in number. As indicated by Little and Dolan (1993), several large farms are located in the vicinity of Pirang, and one of the largest farms in The Gambia is located near Sinchu village. Of the 161 different wage- and self-employment jobs reported in the overall sample, only 11 were carried out in association with activities on large scale commercial farms.[19] This low rate of commercial farm employment is not caused by under-reporting; enumerators were specifically instructed to inquire about field labor, packing and shipping, watering, or other activities that might be worked on such farms.

This analysis begs the question of where the laborers working on commercial farms are coming from. The answer is not entirely clear as no survey of commercial farm employees was undertaken. However, as Little and Dolan (1993) report based on their reconnaissance work, a sizable number appear to be picked up by trucks in the urban areas. No doubt, the limited number of commercial farms operating in the peri-urban area would constrain labor employment. Nevertheless, as indicated in annex 1, promises by commercial farms to employ village workers in exchange for land from the *alkalos* have only rarely been fulfilled in practice. The results of the village surveys suggest that the aggregate impacts (given the current extent of commercial farming) of commercial farm employment in the study area are minimal, and substantial expansion of the sector would be required before employment impacts are substantially felt.

A. Wage Employment

Detailed data on type of employment, commercial farm employment, months worked per activity, and monthly wage rates, are reported in table 4.4 for wage-jobs. Around 40.0 percent of all wage-employment constitutes jobs in the service sector on average, followed in declining order of importance by construction and trades, teaching, agriculture, military and civil service, and commerce. Membership in a founding family tends to increase the likelihood of employment in teaching (27.3 versus 7.0 percent) and the civil service (18.2 versus 2.3 percent). Conversely, membership in a non-founding family is more closely linked with wage-employment in the construction and trades sector (27.9 versus 9.1 percent). Both have nearly equal rates of participation in services. Of the limited number of wage-jobs on commercial farms, the majority are located in Sanyang (38.9 percent of all jobs in the village) and are held by founding families (22.7 percent of all jobs versus 9.3 percent).

[19] One of the *alkalos* of Sinchu village indicated that senior management of the adjacent farm was expatriate while farm hands are residents of nearby villages. The firm used to hire workers from his village; however, the proprietor one day fired them all because they had tried to bring political pressures to bear on him in a dispute over pay.

Table 4.4
Type of Wage-Employment Activities, 1993 Peri-Urban Household Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Total number of wage-employment jobs:						
Service	10	10	6	9	17	26
Construction/trades	2	11	1	2	12	14
Teaching	1	2	6	6	3	9
Fishing/livestock/agriculture	-	8	1	1	8	9
Military/civil service	1	-	4	4	1	5
Commerce	2	-	-	-	2	2
Overall count	16	31	18	22	43	65
Percent of wage-employment jobs (%):						
Service	62.5	32.3	33.3	40.9	39.5	40.0
Construction/trades	12.5	35.5	5.6	9.1	27.9	21.5
Teaching	6.3	6.5	33.3	27.3	7.0	13.8
Fishing/livestock/agriculture	-	25.8	5.6	4.5	18.6	13.8
Military/civil service	6.3	-	22.2	18.2	2.3	7.7
Commerce	12.5	-	-	-	4.7	3.1
Percent of above wage-jobs worked on commercial farms (%)	-	6.5	38.9	22.7	9.3	13.8
Months of wage-employment (mos/annum):						
Service	12.0	10.8	10.3	12.0	10.5	11.1
Construction/trades	12.0	4.7	.0	7.4	5.1	5.4
Teaching	12.0	12.0	12.0	12.0	12.0	12.0
Fishing/livestock/agriculture	-	6.1	6.0	6.0	6.1	6.1
Military/civil service	12.0	-	8.0	8.0	12.0	8.8
Commerce	12.0	-	-	-	12.0	12.0
Overall average	12.0	7.5	9.4	10.5	8.3	9.0
Mean monthly wage rates (D/mth):						
Service	511	418	474	426	482	463
Construction/trades	475	854	6,500	550	1,312	1,203
Teaching	450	715	750	718	691	709
Fishing/livestock/agriculture	-	1,309	80	2,400	1,019	1,173
Military/civil service	450	-	413	413	450	420
Commerce	754	-	-	-	754	754
Overall average	532	822	888	613	858	775

a. A '-' means zero or negligible.

Table 4.5
Type of Self-Employment Activities, 1993 Peri-Urban Household Survey [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Total number of self-employment jobs:						
Commerce	22	10	6	9	29	38
Construction/trades	20	4	7	7	24	31
Service	6	7	2	5	10	15
Fishing/livestock/agriculture	-	8	4	2	10	12
Overall total	48	29	19	23	73	96
Percent of self-employment jobs (%):						
Commerce	45.8	34.5	31.6	39.1	39.7	39.6
Construction/trades	41.7	13.8	36.8	30.4	32.9	32.3
Service	12.5	24.1	10.5	21.7	13.7	15.6
Fishing/livestock/agriculture	-	27.6	21.1	8.7	13.7	12.5
Percent of above self-employment jobs worked on commercial farms (%) [b]	-	-	10.5	8.7	-	2.1
Months of self-employment (mos/annum):						
Commerce	5.5	6.5	4.2	5.9	5.1	5.4
Construction/trades	4.8	3.0	4.0	4.7	4.4	4.5
Service	6.5	10.0	.5	4.2	10.9	8.4
Fishing/livestock/agriculture	-	8.2	.5	-	6.6	6.6
Overall	5.1	7.7	3.4	5.2	5.8	5.6
Mean monthly wage rates (D/mth):						
Commerce	535	1,203	879	659	784	753
Construction/trades	928	558	1,180	1,246	859	950
Service	412	439	8,750	1,934	513	1,021
Fishing/livestock/agriculture	-	2,081	359	531	1,703	1,507
Overall	683	1,193	1,318	1,104	905	954

a. A '-' means zero or negligible.
b. Two of 96 self-employment activities involved commercial farm employment: construction and trades (1); and fishing, husbandry, and agriculture (1).

Both duration of employment and wage rate vary by sector and appear to be inversely related. Teaching, commerce, and service sector jobs tend to provide nearly year-round employment regardless of village or founding family status. Salaried employment in the construction and trades sector averages 5.4 months/year, and agricultural employment 6.1 months. Wage rates average

D709/mth for teaching, D754/mth for commerce, and D463/mth for service sector employment, while employment in the construction and trades sector, and the agricultural sector, are higher at D1,203/mth and D1,173/mth respectively. Military and civil service jobs (and wage jobs generally) tend to offer lower pay (D420/mth), but also tend to confer greater non-monetary benefits as indicated in table 4.7. The limited number of observations for specific types of work within strata preclude a regional wage rate analysis by either village or founding family status. Considering all sectors combined, however, wage rates appear to be higher in Pirang and Sanyang villages at the outskirts of the study area. A number of factors help explain the lower wages in Sinchu village: the recent settlement of many Sinchu households, the village's younger age distribution, its lower education and language ratings, and the abundant supply of under-employed labor within the greater metropolitan area.

B. Self-Employment

Comparable data on type of employment, commercial farm employment, months worked per activity, and monthly wage rates are reported in table 4.5 for self-employed jobs. Of the 96 total jobs reported in the overall sample, 39.6 percent involve commerce and 32.3 percent construction and trades. Around 2.1 percent involve work on commercial farms. With the exception of the agricultural and services sector, which have very wide ranges in the duration of jobs worked, self-employment jobs tend to have a duration of less than 6 months per year with little variation in means across strata. Self-employment earnings tend to be higher than wage-jobs (D954/mth versus D775/mth in table 4.4), and particularly so for the agricultural (D1,507/mth versus D1,173/mth) and service sectors (D1,021/mth versus D463). The limited number of observations prevents an analysis of wage rates among sectors and regions. But, as with wage-employment, wages in Pirang and Sanyang again appear higher than on the urban fringe.

C. Gender Segmented Labor Markets

Wage-employment in the three villages is dominated by males. Although both sexes are engaged in self-employment activity, female participation is lower and skewed toward petty trading. Data are presented in table 4.6 on number and type of jobs held by gender group, type of remuneration, number of months worked per annum, and monthly earnings. Of the 65 salaried jobs in the overall sample, only 3 are held by women. Rates of female participation are higher in the self-employment market, where 24 of the 96 self-employed jobs reported are held by women. Men tend to work in all major sectors of the economy. The vast majority of women (22 of 24 self employed jobs) involve commercial activity, mainly petty trade.

The limited number of observations for females in wage-employment precludes any analysis of wage rates between males and females. However, an analysis of monthly earnings in commercial activities (the only sector with a reasonable number of jobs held by both sexes) indicates that self-employed earnings of females are quite comparable to that of males (D797/mth versus D689/mth). However, it is the exclusion of women from other sectors that reveals the most tangible and important effects on women's access to income. Wage-rates in salaried employment, depending on the sector, may or may not exceed earnings in petty trade, but the longer duration of time worked per year and the non-monetary benefits provided by wage-employment relative to

self-employment (see table 4.7) confer considerable extra rewards. In the self-employment sector, wage rates in construction and trades, services and agriculture are higher than in the commercial sector (which women dominate), and women's participation in these sectors is very low.

Table 4.6
Wage- and Self-Employment by Gender, 1993 Peri-Urban Household Survey, The Gambia [a]

Type of Activity Worked	Total no. Jobs Held by Type (no.)	Months Worked/ Annum (hh)	Remuneration			Monthly Earnings (D/hh)
			In-Cash (%)	In-kind (%)	Both (%)	
Male wage-employment:						
Construction/trades	13	4.9	100.0	-	-	1,269.2
Fishing/livestock/agriculture	9	6.1	77.8	11.1	11.1	1,172.8
Commerce	1	12.0	100.0	-	-	907.0
Teaching	9	12.0	100.0	-	-	708.9
Service	25	11.1	96.0	-	4.0	462.6
Military/civil service	5	8.8	80.0	20.0	-	420.0
Female wage-employment: [b]						
Construction/trades	1	12.0	100.0	-	-	345.0
Fishing/livestock/agriculture	-	-	-	-	-	-
Commerce	1	12.0	100.0	-	-	600.0
Teaching	-	-	-	-	-	-
Service	1	-	100.0	-	-	-
Military/civil service	-	-	-	-	-	-
Male self-employment:						
Fishing/livestock/agriculture	12	6.6	83.3	-	16.7	1,507.3
Service	14	8.4	57.1	7.1	35.7	1,022.3
Construction/trades	30	4.5	96.7	-	3.3	949.5
Commerce	16	5.1	81.3	6.3	12.5	688.9
Female self-employment: [c]						
Fishing/livestock/agriculture	-	-	-	-	-	-
Service	1	-	100.0	-	-	1,000.0
Construction/trades	1	-	100.0			-
Commerce	22	5.8	100.0	-	-	797.2

a. A '-' means zero or negligible.
b. Includes kitchen helper (1), laborer (1), and petty seller (1).
c. Includes marketing shrimp (1), cloth stitching (1), taxi driver (1), fish monger (1), petty trading (14), retail trader (1), shopkeeper or small business (3), and wine seller (2). Unfortunately, data are not sufficiently detailed to ascertain whether "petty trading" comprises vegetable trading.

Table 4.7
Household Income and Non-Wage Benefits, 1993 Peri-Urban Household Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
No. households in sample	40	40	40	36	84	120
Household income (dalasis/annum):[b]						
Self-employment	6,180.8	8,183.7	1,695.4	2,423.8	6,608.8	5,353.3
Wage-employment	2,366.6	3,682.1	7,950.8	9,917.8	2,415.9	4,666.5
Remittances	109.8	958.5	20.0	849.2	154.3	362.8
Upland crops	203.6	462.8	506.8	528.6	332.1	391.0
Vegetables	-	1,020.9	134.7	795.6	209.3	385.2
Fruit tree (non-orchards) income	135.6	109.1	711.0	352.5	304.1	318.6
Rice	-	398.3	351.9	475.9	153.3	250.1
Orchard income	-	501.3	15.0	173.6	171.4	172.1
Total household net income	8,996.3	15,316.7	11,385.4	15,517.0	10,349.1	11,899.5
Household income per capita dalasis/annum):[c]						
Wage-employment	268.3	359.9	680.7	857.9	249.6	455.7
Self-employment	700.8	800.0	145.2	209.7	682.7	522. 8
Remittances	12.4	93.7	1.7	73.5	15.9	35.4
Farming net income	38.5	243.6	147.2	201.2	120.9	148.1
Total household net income	1,020.0	1,497.2	974.8	1,342.3	1,069.1	1,162.1
Non-monetary benefits associated with wage-employment (% hh with):						
Subsidized food	-	5.0	5.0	5.6	2.4	3.3
Medical assistance	7.5	22.5	15.0	19.4	13.1	15.0
Paid leave	25.0	20.0	12.5	25.0	16.7	19.2
Pension benefits	32.5	7.5	15.0	19.4	17.9	18.3
Transport to work	25.0	15.0	5.0	8.3	17.9	15.0
Non-monetary benefits associated with self-employment (% hh with):						
Subsidized food	-	-	-	-	-	-
Medical assistance	-	-	17.5	16.7	1.2	5.8
Paid leave	-	-	-	-	-	-
Pension benefits	-	-	-	-	-	-
Transport to work	-	-	2.5	2.8	-	.8

a. A '-' means zero or negligible.

b. Data on income from livestock activities were not collected, although changes (purchases and sales of livestock numbers) were recorded. These latter data indicate only marginal buying and selling throughout the year although the imputed value for home consumption could still be considerable.

c. Household income divided by mean family size in table 3.1.

D. Household Income and Non-Monetary Benefits

Monetary and non-monetary sources of earnings and benefits at the household level (that is, aggregated over household members) are summarized in table 4.7. Wage- and self-employment earnings are the mean annualized incomes of all family members employed within the household. Remittance income is the mean of all receipts (>D150/transaction) by all family members. Detailed information on agricultural earnings are presented in chapter 6. Data on income from fruit trees, orchards, upland crops, rice, and vegetables in table 4.7 represent the net income of each respective agricultural activity earned by all plot managers within the household.

The average annual income of households in the overall sample is D11,900 or about US$1,434 (US$1.00=D8.30 in 1992-93). Assuming an average family size of 10 persons, this amount is substantially lower than the figure of US$260/capita GNP reported for the country as a whole in 1990 (World Bank 1992). The majority of income is derived from self- (45.0 percent) and wage-employment (39.2 percent) activities. Despite the rural character of life in Pirang and Sanyang villages, net income from farming represents only 12.7 percent of income in the overall sample. Annual household incomes are highest in Pirang (D15,317 or US$1,845) and lowest in Sinchu (D8,996 or US$1,084); however, once adjustments are made for family size, the income differential between Sanyang and Sinchu disappears. It is understandable that agricultural incomes in Sinchu are below those of the more rural villages, and the higher self-employment of Sinchu village is expected. It is surprising that the most remote village (Sanyang) has the highest level of wage-employment. Many people have established residences in Sanyang in recent years and now commute to and from the urban center. The data appear to be picking up this phenomena. The annual incomes of founding families (D15,517 or US$1,870) on average are 49.9 percent higher than those of non-founding families (D10,349 or US$1,247) due mainly to their higher wage income, higher levels of remittances, and higher earnings from upland crops, rice, and vegetables.

Horticultural crops are making an important contribution to household income in one survey village, and potentially represent an important source of income growth in the others. Of the total household income in the overall sample, 2.7 percent is derived from sales of fruit tree products (non-orchards), 1.4 percent from orchard production, and 3.2 percent from vegetable production. However, if one examines the same indicators in Pirang village, fruits (orchard and non-orchard) constitute 4.0 percent, and vegetables 6.7 percent of household income. The higher income of Pirang village is derived from higher vegetable income and self-employment (including vegetable marketing and processing) without major income cuts in other competing activities (for example, upland crops or rice). As vegetables tend to be produced in the dry season, gardening and trading thus appear to be decreasing both unemployment and underemployment in the survey village, in the process lowering the labor surplus and increasing total household income.

Comparisons of overall wage rates in tables 4.4 and 4.5 indicate higher earnings in self-employed activities than in wage-employment. Part of this difference can be attributed to greater job security associated with the latter. In addition, wage-jobs confer greater non-monetary benefits. Of the 65 (96) wage-employment (self-employment) jobs in the sample, 3.3 (-) percent offer subsidized food, 15.0 (5.8) percent medical assistance, 19.2 (-) percent paid leave, 18.3 (-) percent pension benefits, and 15.0 (.8) percent transport assistance to work. Placing a monetary

value on these benefits would be prohibitively difficult, although it is probably reasonable to assume that factoring in their value would substantially narrow the earnings differential.

IV. Credit and Savings Mobilization

Household asset and financial liquidity within the household are affected by savings and credit activity. Each adult member of the household was asked about the three largest loans or *osusu* withdrawals s/he received or took out in the previous year. Data are tabulated in table 4.8 on type of financial activity, source and uses of credit, security requirements, and level of credit or withdrawals. Table 4.9 contains further detailed data on *osusu* and *kafo* financial activities. *Osusu* withdrawals differ from *kafo* and bank loans in two important ways. First, an *osusu* is a savings group whereby a fixed number of members each deposit a set amount at specified intervals during the rotation. The *osusu* pot is offered to one or more members of the same group at specified intervals during the rotation, and the member either has the right to take the money or pass on the pot until a later date. Whereas, *osusu* is a savings mechanism whereby a member periodically deposits a set amount for withdrawal at a future date, *kafo* loans and bank loans permit a member to borrow services or money in the present with repayment over a specified period in the future.

Five percent of households in the overall sample reported having an *osusu* head who resides in the household, and 9.2 percent a *kafo* head. Households in the sample reported a total of 136 separate financial transactions in the previous year. Of this total, 52.2 percent represent *osusu* withdrawals, 42.6 percent *kafo* loans, 1.5 percent private loans from friends and family, 1.5 percent from traders, and 0.7 percent each from an employer, another household member, or a bank. Not all households reported financial transactions. As most *osusu* rotations are a year or less in duration, any household participating in an *osusu* should have reported a withdrawal sometime in the previous year. As indicated in table 4.8, however, only 35.8 percent of households had one or more adults receiving a loan or making an *osusu* withdrawal in the previous year, a relatively low level of financial market activity. *Osusu* activity was most prevalent in Pirang village. Founding families tend to rely to a greater degree on *kafo* loans (54.4 versus 34.2 percent) while non-founding families tend to resort to *osusus* (59.5 versus 42.1 percent).

The majority of loans and withdrawals (based on number not value) were used to fulfill social obligations (45.6 percent), followed in declining order of importance by other uses: durable goods purchases, home construction, business, farm inputs and equipment, and education. Overall, the average *osusu* withdrawal is D12.5, D9.4 for *kafo* loans, and D135.7 for other types of loans, with little variation among strata. Most loans were not guaranteed by collateral (69.1 percent), although a high percentage of loans were guaranteed by the need for reciprocity (27.9 percent). In the latter case, a loan is granted by individual (A) to another (B) on grounds that in the future the lender may need cash and have to borrow (from B) in return. Lending between individuals (A) and (B) is based on reciprocal exchange that at one level reduces search costs between creditor and borrower in the informal market, and at another level acts as a form of guarantee.[20]

[20] Failure to grant credit means the loss of a potential creditor in the future, and failure to repay means loss of credit worthiness.

Table 4.8
Credit Use and *Osusu* Withdrawals, 1993 Peri-Urban Household Survey [a,b]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Osusu withdrawals in cash	14	57	-	24	47	71
Kafo loans in cash	-	58	-	31	27	58
Other loans in cash	1	5	1	2	5	7
Percent households (%):						
Receiving loans or *ososus*	20.0	85.0	2.5	36.1	35.7	35.8
With *osusu* head	-	15.0	-	11.1	2.4	5.0
With *kafo* head	2.5	25.0	-	13.9	7.1	9.2
Source of credit (% of loans/withdrawals):						
Osusu	93.3	47.5	-	42.1	59.5	52.2
Kafo	-	48.3	-	54.4	34.2	42.6
Traders	-	1.7	-	-	2.5	1.5
Families or friends	-	1.7	-	3.5	-	1.5
Bank	6.7	-	-	-	1.3	.7
Household member	-	-	100.0	-	1.3	.7
Employer	-	.8	-	-	1.3	.7
Principal use of credit (% of loans/withdrawals):						
Social obligations	-	51.7	-	45.6	45.6	45.6
Purchase of durable goods	13.3	6.7	-	3.5	10.1	7.4
Home construction	46.7	.8	100.0	-	11.4	6.6
Start business	40.0	1.7	-	8.9	1.8	5.9
Farm inputs and equipment	-	3.3	-	7.0	-	2.9
Education	-	1.7	-	3.5	-	1.5
Other	-	34.2	-	38.6	24.1	30.1
Security (% of loans/withdrawals)						
Reciprocal loan	-	31.7	-	17.5	35.4	27.9
Guarantor	-	1.7	100.0	-	3.8	2.2
Other	-	.8	-	-	1.3	.7
None or missing	100.0	65.8	-	82.5	59.5	69.1
Mean value of withdrawals/credit (D):						
Osusu withdrawals	6.0	14.1	-	17.0	10.2	12.5
Kafo loans	-	9.4	-	8.4	10.5	9.4
Other loans	150.0	160.0	-	150.0	130.0	135.7

a. A '-' means zero or negligible.

b. Each adult of household was asked for the 3 largest loans or *osusu* withdrawals in the previous year. Multiple credits may have accrued to one person.

Table 4.9
***Osusu* Deposits and Credit Repayment, 1993 Peri-Urban Household Survey, The Gambia [a]**

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Osusu withdrawals in cash	14	57	-	24	47	71
Kafo loans in cash	-	58	-	31	27	58
Pay-in period for *osusu* (% withdrawals):[b]						
Day	50.0	-	-	-	14.9	9.9
Week	28.6	57.9	-	62.5	46.8	52.1
Month	14.3	1.8	-	-	6.4	4.2
Other	7.1	-	-	-	2.1	1.4
Undetermined or irregular	-	40.4	-	37.5	29.8	32.4
Number of pay-in periods for *osusu*: [b]						
Day	21.7	-	-	-	21.7	21.7
Week	21.5	23.0	-	20.7	24.3	22.8
Month	9.0	14.0	-	-	10.7	10.7
Other	14.0	-	-	-	14.0	14.0
Undetermined or irregular	-	30.8	-	28.6	32.2	30.8
Amount paid-in per *osusu* period (D):[b]						
Day	4.1	-	-	-	4.1	4.1
Week	8.8	15.9	-	17.7	13.4	15.1
Month	5.0	50.0	-	-	20.0	20.0
Other	10.0	-	-	-	10.0	10.0
Undetermined or irregular	-	9.8	-	15.8	6.0	9.8
Pay back period for *kafo* loans (%)[c]						
Week	-	5.2	-	6.5	3.7	5.2
Month	-	3.4	-	3.2	3.7	3.4
Undetermined or irregular	-	91.4	-	90.3	92.6	91.4
Number of payments for *kafo* loans (no):[c]						
Week	-	45.0	-	41.5	52.0	45.0
Month	-	29.0	-	29.0	29.0	29.0
Undetermined or irregular	-	35.2	-	32.1	38.6	35.2
Amount per payment to *kafo* (D):[c]						
Week	-	15.0	-	17.5	10.0	15.0
Month	-	55.0	-	10.0	100.0	55.0
Undetermined or irregular	-	7.3	-	7.6	7.0	7.3

a. A '-' means zero or negligible.

b. Percentage of total *osusu* transactions, number of periods between dates of payout to same contributing member, and amount of payout by type of pay-in period, respectively.

c. Percentage of total *kafo* transactions, number of payments between receipt of loan and time loan is retired, and amount of repayment by type of repayment period, respectively.

With regard to *osusus*, the majority of systems required weekly deposits (52.1 percent) or irregular payments (32.4 percent). Most rotations are roughly 22 days, 23 weeks, or 11 months in duration. The amount paid in per *osusu* interval ranges from D4.1/day to D15.1/week to D20.0/month with considerable variation among villages.[21] A far higher percentage of *kafo* loans are of irregular interval.

V. Labor Utilization

Kafo groups have a long tradition in The Gambia. A number of members will form the *kafo* group, and contract out their labor for a specified task and area based on the promise of later repayment. Theoretically, *kafo* labor would be higher on the fields of founding families than non-founding families; as major landholding groups, labor can be demanded in exchange for land, with nominal or competitive rates being paid depending on the circumstance. Also the higher non-farm earnings and higher land/resident ratios of founding families provides greater ability to hire labor. Detailed time flow data was not collected during the course of this study. Rather each plot manager was asked to respond whether each of six types of labor (male wage, female wage, *kafo* wage, male family labor, female family labor, and child labor) were used on each major plot under his or her management. Responses are tabulated as a percentage of all plots in the respective strata (table 4.10).

Kafo labor tends to be more important on land preparation (3.0 percent of plots) and weeding (4.5 percent) but results vary by crop. A significant number of rice plots received *kafo* labor during the labor intensive tasks of land preparation and planting. As many as 11.7 percent and 11.1 percent of grain and groundnut plots respectively had *kafo* labor applied (table 4.11) during weeding. Wage-labor tends to be more important on land preparation and tends to be carried out by males. However, as indicated in table 4.11, male wage labor is crop specific, being used on 13.8 percent of garden plots and 21.4 percent of orchards at the time of land preparation, and 4.9 percent of grains and 7.1 percent of orchards at the time of weeding. While not representing a significant usage, founding families tend to hire more wage and *kafo* labor than non-founding families. With regard to land preparation, 11.0 percent (4.6 percent) versus 3.6 percent (2.1 percent) of the plots of founding families had male wage (*kafo* labor) labor applied.

[21] It is not clear why *osusu* deposits (times the number of pay-in intervals) are so much higher than the average value of an *osusu* withdrawal. Either the pot is increasing in value as people decide to pass on their turn in a rotation, people are under-reporting withdrawals, or missing value problems are biasing results.

Table 4.10
Farm Labor Utilization by Household Strata, 1993 Peri-Urban Household Survey, The Gambia

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of plot managers	143	255	227	237	388	625
Land preparation (% plots employing):						
Male wage labor	.7	10.2	5.7	11.0	3.6	6.4
Female wage labor	-	.4	.9	1.3	-	.5
Kafo wage labor	2.1	3.9	2.6	4.6	2.1	3.0
Male family labor	69.9	28.2	29.1	26.2	45.4	38.1
Female family labor	40.6	66.3	39.2	61.6	43.8	50.6
Child family labor	53.8	15.3	10.6	12.2	28.6	22.4
Planting (% plots employing):						
Male wage labor	.7	.4	1.3	.8	.8	.8
Female wage labor	.7	-	.4	.4	.3	.3
Kafo wage labor	-	2.4	1.3	3.4	.3	1.4
Male family labor	69.2	22.7	26.0	24.1	41.0	34.6
Female family labor	47.6	67.8	42.3	64.6	47.4	53.9
Child family labor	58.0	16.1	16.3	14.3	32.7	25.8
Weeding (% plots employing):						
Male wage labor	-	1.2	3.5	2.1	1.5	1.8
Female wage labor	.7	-	.4	.4	.3	.3
Kafo wage labor	7.0	3.1	4.4	5.1	4.1	4.5
Male family labor	66.4	24.7	26.9	25.7	40.7	35.0
Female family labor	64.3	62.0	41.4	59.1	52.6	55.0
Child family labor	60.8	22.0	22.9	21.9	36.9	31.2
Harvesting (% plots employing):						
Male wage labor	-	.4	2.2	1.7	.5	1.0
Female wage labor	.7	-	-	-	.3	.2
Kafo wage labor	-	1.6	1.3	3.0	-	1.1
Male family labor	69.2	20.8	22.9	22.4	38.9	32.6
Female family labor	62.9	67.8	38.8	62.4	52.3	56.2
Child family labor	61.5	22.4	14.1	15.2	36.3	28.3
Watering (% plots employing):						
Male, female, or *kafo* wage labor	-	-	-	-	-	-
Male family labor	1.4	3.1	.9	2.1	1.8	1.9
Female family labor	3.5	36.9	21.1	34.6	16.8	23.5
Child family labor	2.8	13.3	9.3	9.7	9.3	9.4
Labor sufficient (% yes):						
Land preparation	4.9	7.5	41.0	21.5	17.5	19.0
Planting	14.7	2.4	23.8	9.3	15.2	13.0
Weeding	15.4	3.9	38.8	16.0	21.1	19.2
Harvesting	12.6	2.4	23.3	9.7	13.9	12.3
Watering	2.8	1.6	17.2	5.9	8.5	7.5

a. A '-' means zero or negligible.

Table 4.11
Farm Labor Utilization by Crop, 1993 Peri-Urban Household Survey, The Gambia

	Grains[b]	Rice	Groundnuts	Gardens	Orchards
Number of plot observations	103	122	81	160	14
Land preparation (% plots employing):					
Male wage labor	4.9	2.5	2.5	13.8	21.4
Female wage labor	-	1.6	-	.6	-
Kafo wage labor	2.9	9.8	1.2	1.3	-
Male family labor	92.2	6.6	92.6	15.6	57.1
Female family labor	28.2	95.1	29.6	85.6	14.3
Child family labor	44.7	6.6	58.0	15.0	7.1
Planting (% plots employing):					
Male wage labor	1.9	-	1.2	.6	-
Female wage labor	-	.8	-	-	-
Kafo wage labor	-	7.4	-	-	-
Male family labor	95.1	1.6	87.7	5.6	57.1
Female family labor	32.0	95.1	43.2	86.3	28.6
Child family labor	49.5	9.8	63.0	16.3	7.1
Weeding (% plots employing):					
Male wage labor	4.9	-	1.2	.6	7.1
Female wage labor	-	.8	-	-	-
Kafo wage labor	11.7	4.1	11.1	-	-
Male family labor	94.2	1.6	84.0	5.0	64.3
Female family labor	39.8	83.6	58.0	86.3	35.7
Child family labor	59.2	16.4	67.9	21.3	21.4
Harvesting (% plots employing):					
Male wage labor	1.0	-	3.7	.6	-
Female wage labor	-	-	-	-	-
Kafo wage labor	-	5.7	-	-	-
Male family labor	92.2	-	86.4	4.4	64.3
Female family labor	39.8	95.9	59.3	81.9	28.6
Child family labor	52.4	9.0	67.9	22.5	28.6
Watering (% plots employing):					
Male, female, or *kafo* wage labor	-	-	-	-	-
Male family labor	-	-	-	2.5	50.0
Female family labor	-	4.1	-	85.0	28.6
Child family labor	-	2.5	-	33.1	14.3
Labor sufficient (% yes):					
Land preparation	20.4	26.2	12.3	25.6	14.3
Planting	11.7	13.1	23.5	15.6	-
Weeding	30.1	21.3	19.8	18.8	7.1
Harvesting	14.6	15.6	19.8	11.9	-
Watering	-	1.6	-	25.0	14.3

a. A '-' means zero or negligible.
b. Maize, millet and sorghum.

A number of points stand out from the analysis of family labor. Excluding watering, female labor is used on 50.6 percent to 56.2 percent of the plots in the overall sample depending on the task. The rate of male labor on plots is only slightly greater than labor provided by children (32.6 to 38.1 percent versus 22.4 to 31.2 percent, respectively). The extent to which male and female labor are involved depends on the crop grown and presumably on whether the manager is male or female. With respect to grains and groundnuts, which tend to be cultivated by male plot managers, over 92 percent of plots received male labor at land preparation, but only 6.6 percent and 15.6 percent of rice and garden plots (normally managed by women), respectively, had male labor applied. Similar relationships hold for planting, weeding, and harvesting. Conversely, women worked on between 28.2 and 39.8 percent of grain plots (depending on the task), which tend to be controlled by men, while devoting their own labor on between 81.9 and 86.3 percent (83.6 and 95.9 percent) of the vegetable (rice) plots, respectively, depending on the task.

As a result of high out-migration that has reduced the supply of able bodied workers in the villages, and gender segmented labor markets, constraints on labor supply for certain tasks would be expected. Each plot manager for each plot was asked if sufficient labor was available for each of five crop activities. Overall, less than 19.2 percent of plot managers for all activities reported having sufficient labor. Rates were extremely low for watering. Labor sufficiency rates tend to be highest in Sanyang and lowest in Pirang. While the higher social status of founding families results in some additional leverage in hiring *kafo* labor, it does little to alleviate labor scarcity. Labor constraints appear to be severe for all crops, but are particularly severe for the task of preparing land for groundnuts and orchards, planting of rice and gardens, weeding of orchards, and harvesting generally.

These labor constraints are not simply a matter of lack of animal traction or a shortage of wage labor. As will be seen in chapter 5, animal traction is widely used on upland fields, and a sizable amount of wage labor is employed. Financial liquidity problems no doubt cause cash constraints. The fact that a high percentage of young able-bodied males (and to a lesser extent females) are “non-resident” in Pirang and Sanyang is no doubt an important factor as well. But it is nonetheless surprising that labor shortages are reported at the same time that a relatively strict segmentation of labor is observed, particularly the low rates of male labor on vegetable crops during the agricultural off-season. Further it is not a matter of profitability, as vegetables are widely perceived to be highly remunerative (see annex A and Little and Dolan 1993). This issue is perplexing and deserving of further investigation.

CHAPTER 5

LAND RIGHTS AND TRANSFERS

I. Introduction

The land market provides the mechanism for households to adjust farm size, for plot managers to acquire and dispose of plots, and for newcomers to acquire land for residential use and farming. The extent to which these processes are market driven, open and transparent, and ensure secure and equitable access to land are the focus of this chapter. The analysis reveals that the land market is heavily linked to administrative allocations by the *alkalo* and founding families, but commercial rentals and sales of residential property have become important within the last decade. Evictions are shown to be a major cause of land dispossessions in Sinchu village, and combined with the political power of the *alkalo* in land allocations, are acting to undermine the security of land rights. Substantial individual rights are held by plot managers to use the land and make plot improvements. However, the ability to transfer land to others is heavily compromised by the need to acquire authorizations both within the household, and from landholding groups. Given that many plot managers, male and female, have been able to acquire land in the study area, it seems reasonable to assume that the customary system is providing equitable and secure access to land in the more peri-rural areas. Yet, increasing land scarcity is beginning to undermine access and land rights in the areas undergoing rapid conversion to residential land uses.

II. Plot Acquisition Histories

A. All Parcels

Newcomers from Banjul and Serekunda, from up-river and abroad, are contacting the *alkalos* in all villages seeking land (annex A). Land may be obtained directly from the *alkalo* or *kabilo* head, but the *alkalo's* consent must be obtained for any transaction, and his involvement is required in any dispute. A tribute of "kola nuts" is offered to the "owners" of the land, largely as a symbolic gesture, but cash payments are becoming more commonplace. Agricultural lands are normally not leased, rented, bought, or sold to any significant extent in any site. Borrowed land must be returned at the season's end, although some families have borrowed the same piece of land for decades. Residential property or land for a compound is bought and sold in Sinchu, less so in Pirang, and not at all in Sanyang. However, only the improvements on land are transferred through sale according to the *alkalos*, not the land itself.

An examination of the mechanisms used to acquire a parcel provides a backward look at land market processes. These provide a good picture of the present structure of land transactions as long as the land market is static. However, to the extent that ownership term is lengthy and the land market has been very dynamic over time, plot acquisition histories will provide an atypical picture of current land access and transfer mechanisms. All plot managers in the household were asked to provide information on year of acquisition, mode of acquisition, and from whom the plot was acquired. For plots purchased, plot managers were further asked to provide information on source of financing and motive of purchase. Asking these questions for the numerous small rice and private

vegetable plots would have been prohibitively difficult. In these cases, the respondent was asked to provide acquisition histories for either a representative plot or the principal plot among each. Results of these questions are tabulated in table 5.1. The data in table 5.2 further clarify the linkages between type of acquisition, gender, and from whom the plot is acquired.

Non-commercial transactions are the predominant mode of land transfer. Of the 684 major plots[22] for which complete information is available, 34.8 percent in the overall sample were obtained through inheritance, 32.2 percent through borrowing, and 23.3 percent through gift by the *alkalo* or *kabilo* head. Only 1.9 percent were obtained through spontaneous occupation—that is, clearing and settling on land without permission of another holder. Another 4.9 percent of plots were purchased.

As would be expected, households in Sanyang village tend to rely to a greater degree on inheritance for land access, while borrowing, allocations by the *alkalo*, and purchases are more common in Sinchu village. As indicated in table 5.2, inheritances are nearly equally divided among male (44.5 percent) and female (44.1 percent) plot managers. The communities are patrilocal and land inheritance is normally along the male line (from mother-in-law to daughter-in-law). However, for rice and vegetables, plots are typically transferred from mothers to daughters. Inheritance was the principal mode of land acquisition for founding families (59.4 versus 17.6 percent), while non-founding families tend to rely to a greater degree on borrowings (37.7 versus 24.5 percent) and allocations by the *alkalo* or *kabilo* head (29.8 versus 14.0 percent).

The distinction between a borrowed plot and an allocation by the *alkalo* or *kabilo* head is not always clear. As indicated in table 5.2, 13.4 percent of plots listed as borrowed were in fact obtained from the *alkalo*, while 50.9 percent of gifts by the *alkalo* or *kabilo* head were in fact reported as coming from the founding family of which the *alkalo* is a member. Borrowing of land, which one might normally expect to decline in importance with urbanization, is highest in Sinchu village, although the relatively recent settlement of many residents would not have permitted sufficient time for many inheritances to have occurred (table 5.1). Most borrowed land is acquired by females (68.6 versus 30.9 percent) and acquired mainly from founding families (45.5 percent), the *alkalo* (13.4 percent), another household member (10.7 percent), a new settler in the village (9.8 percent),[23] or a non-villager (9.8 percent) (table 5.2). Acquisitions from the government (leaseholds) were not important in any of the study villages.

The importance of allocations by the *alkalo* and *kabilo* head is relatively constant across all three village sites. Founding families tend to exchange land within and among themselves, while non-founding families tend to rely on allocations from the *alkalo* or founding families. As indicated in table 5.1, 51.0 percent of the plots held by founding families were passed down from forefathers through inheritance or acquired from other founding families in the village (see also table 5.2). Another 32.2 percent were obtained from other family members, and 4.9 percent were allocated by the compound head. With regard to non-founding families, 40.6 percent of the plots were obtained

[22] As indicated in chapter 3, a major plot (for either rice or vegetables) means many dispersed plots consolidated.

[23] Usually absentee and needing someone to occupy or guard the land.

Table 5.1
Plot Acquisition Histories, 1993 Peri-Urban Household Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of valid plot observations	128	313	243	280	404	684
Mode of parcel acquisition (% of total):						
Inherited	2.2	39.0	48.0	59.4	17.6	34.8
Borrowed-in [b]	41.3	33.5	25.4	24.5	37.7	32.2
Gift by *alkalo*/*kabilo* head	24.6	20.8	25.8	14.0	29.8	23.3
Purchased	22.5	.6	.4	-	8.3	4.9
Spontaneous occupation	-	3.8	.4	-	3.2	1.9
Other	9.4	2.2	-	2.1	3.4	2.9
Acquired from whom (% of total plots):						
Household member	2.9	31.1	19.7	32.2	14.0	21.5
Founding family	3.7	46.8	65.6	51.0	40.6	44.9
Compound head	3.7	4.5	4.1	4.9	3.7	4.2
alkalo	65.4	2.9	4.9	3.5	24.6	15.9
New settler in village	.7	-	-	-	0.2	.1
Non-family villager	1.5	8.0	3.3	1.4	7.6	5.1
Non-villager	19.9	1.3	.4	2.4	6.2	4.6
Government		-	2.0	1.7	-	.7
Other	2.2	5.4	-	2.8	3.0	2.9
Ownership time (1993 minus year acquired):						
All parcels combined	6.5	17.9	22.6	24.1	12.7	17.1
Borrowed-in parcels	2.5	6.7	15.3	18.4	5.9	9.4
Number of purchases	28	2	2	1	31	32
Source of financing for purchases:						
Savings from outside bank	79.3	100.0	100.0	100.0	81.3	81.8
Bank savings	20.7	-	-	-	18.8	18.2
Informal loan	-	-	-	-	-	-
Formal loan	-	-	-	-	-	-
Primary motive of purchase:						
Land for sons or inheritance	16.1	-	50.0	-	17.6	17.1
Residence	74.2	100.0	50.0	100.0	73.5	74.3
Other	9.7	-	-	-	8.8	8.6

a. A '-' means zero or negligible.
b. Including only 1 instance of a plot rented-in.

Table 5.2
Plot Acquisition by Gender and Source, 1993 Peri-Urban Household Survey, The Gambia [a]

	Inheritance	Gift by *alkalo* or *kabilo* head	Purchased	Borrowed
Gender of plot manager (%):				
Male family	44.5	69.6	85.3	30.9
Female family	44.1	29.8	14.7	68.6
Non-family borrower	11.3	.6	-	.4
Acquired from whom (%):				
Household member	41.7	9.9	12.1	10.7
Founding family	51.7	50.9	-	45.5
Compound head	2.5	6.2	-	4.9
alkalo	.4	29.8	66.7	13.4
New settler in village	-	-	-	.4
Non-family villager	-	1.9	3.0	9.8
Non-villager	-	-	18.2	9.8
Government	.4	-	-	1.8
Other	3.3	1.2	-	3.6

a. A '-' means zero or negligible.

from founding families, 24.6 percent from the *alkalo*, and 14.0 percent from other household members. Urbanization however appears to increase the concentration of power in the hands of the *alkalo*. In Pirang and Sanyang villages, 46.8 and 65.6 percent respectively of all plots were acquired from founding families. However, in Sinchu, the *alkalo* remains directly involved in the allocation of 65.4 percent of the plots, while another 19.9 percent were obtained from non-villagers. Males appear to have preferential access to land through the *alkalo* or *kabilo* head (69.6 versus 29.8 percent). While women depend on such allocations for their vegetable plots, men (in particular the household head) acquire the family land through this mechanism.

B. Purchases

Purchases tend to be undertaken mainly by males (85.3 versus 14.7 percent) and land is mainly purchased from the *alkalo* (66.7 percent) or someone outside the village (18.2 percent), but a significant number (12.1 percent) also purchased land from another family member. Purchases are largely confined to Sinchu village on the urban fringe. Most plots were purchased for residential use (74.3 percent in the overall sample), or for sons or inheritance. With Sinchu's near access to the urban market, combined with a high percentage of settlers coming from the urban areas (chapter 3), one might have expected a greater reliance on formal banking institutions for financing land purchases. However, 81.8 percent of the purchases were made out of personal savings held outside formal banks, and another 18.2 percent from bank saving deposits. However, no formal or informal credit was used to acquire land.

C. Land Market Trends

The different modes of land transfers in table 5.1 are partitioned by years of acquisition in table 5.3 to analyze changes in the land market over time. Inheritance, which represented 66.9 percent of all transactions over the period 1912-73 had declined to only 6.3 percent of all transactions by 1989-93. Gifts by the *alkalo* or *kabilo* head have been volatile over time, ranging between 15.1 percent and 38.4 percent of transfers depending on the period, with a clear downward trend discernible since the early 1980s. Both purchases and borrowings, in contrast, have increased in relative shares with time. Purchases over the period 1912 to 1978 were negligible. However since 1979, purchases have represented between 8.1 and 10.5 percent of all transactions. Likewise, land borrowing remained relatively static over the period 1912 to 1983 ranging between 5.2 and 12.6 percent. However, borrowings represented 25.3 percent of all transfers during the period 1984-88, and 63.5 percent of transfers over the period 1989-93.

The short ownership period of borrowed plots (2.5 years, table 5.1) in Sinchu leads to an over-weighting of Sinchu plots in transfer totals. Nevertheless, growing land scarcity throughout the peri-urban area in recent years appears to be reducing the incidence of inheritance and gifts and increasing the importance of land borrowing and purchases. Land scarcity also appears to be influencing the duration of land rights held. In Sanyang village, with the highest land/resident ratio, plots have been borrowed-in for 15.3 years on average, followed by 6.7 years in Pirang village, and 2.5 years in Sinchu village (table 5.1). However, founding family status appears to be providing some security against shortened rental periods (18.4 versus 5.9 years). As land scarcity has tightened, rental periods have declined for the non-landholding groups. Whether and at what pace borrowings will be converted into commercial rentals can only be assessed with time.

III. Alienated Land

As land acquisitions provide a backward overview of land transfer mechanisms resulting in land accumulation, land alienations provide a backward glimpse at land asset disposition within the household. The household head and available adult family members were asked to identify plots of land disposed of in the previous 10 years. Plots rented-in, borrowed-in or loaned-in for three years or less were excluded because of the preponderance of such transactions, and their high turnover particularly in Sinchu and Pirang villages. Landholdings that may have existed in other villages but disposed were also excluded precluding such transactions as a wife giving up land in her home village upon coming to her husband's household to live. Because individual plot managers were not asked separately about land dispositions, it is almost certainly the case that many inheritances between mothers and daughters went unrecorded. Also, "land alienation" or "land disposition" in The Gambian context is terribly imprecise. Land bequeathed to sons or daughters, while perhaps alienated from the parents' household, nonetheless is considered as remaining in the family, thus the most likely explanation for the low level of inheritances reported in table 5.4. The recent arrival of many migrants in Sinchu village also acted to reduce the overall number of dispositions.[24]

[24] Only 65.0 percent of families in Sinchu had lived there for the past 10 years versus rates of 95.0 and 92.5 percent, respectively, for current populations in Pirang and Sanyang (table 3.5).

Table 5.3
Changes in Land Acquisition over Time, 1993 Peri-Urban Household Survey, The Gambia [a]

	1912-1973	1974-1978	1979-1983	1984-1988	1989-1993
Number of observations[b]	175	58	99	95	159
Inheritance[c]	66.9	79.3	35.4	28.4	6.3
Spontaneous occupation[c]	-	1.7	-	9.5	1.3
Gift by *alkalo*/*kabilo* head[c]	20.0	13.8	38.4	24.2	15.1
Purchase[c]	.6	-	8.1	10.5	9.4
Borrowed-in [c]	12.6	5.2	10.1	25.3	63.5
Other[c]	-	-	8.1	2.1	4.4

a. A '-' means zero or negligible.
b. Excludes 109 missing observations for which no year of acquisition was recorded.
c. Percentage of total.

Only eleven households (with 13 plots alienated) reported having had land 10 years ago that was no longer held at the time of the survey. Of the 13 plots disposed, the majority (10) were located in Sinchu village. Around 30.8 percent had been acquired from the *alkalo* or *kabilo* head, 15.4 percent had been spontaneously occupied, 7.7 percent each had been inherited or purchased, and 38.5 percent were acquired through other mechanisms. The fact that most of the alienations occurred between 1989 and 1993 probably reflects both the evolution of land scarcity in the area, and memory fatigue with time. On average, the parcels alienated had been held 15.6 years and, in the case of Sinchu where most alienations had taken place, 12.2 years. The majority of plots involved eviction or taking back land from the respondent household and reallocating it to new settlers in the village (84.6 percent). Nearly all the alienated plots (10) of non-founding families involved evictions. While three founding families reported alienating land, the transactions involved either selling (66.7 percent) or giving (33.3 percent) the land to new settlers.

In general these results corroborate the fears of eviction expressed by respondents in chapter 3, particularly residents in Sinchu village. Moreover, the lands from which households are "evicted," had generally been held for quite a long period of time, sufficiently long for a household to have made investments or planned its disposition to children. These data beg the question of why the evicted households were selected for eviction, why they did not offer to pay for the land in order to retain it, whether compensation was paid, or whether the *alkalo* incurred personal gain or operated with the public's best interest in mind. These specific questions were not addressed in the survey, but based on informal interviews, those households losing land tend to be compounds with

ample and "underutilized" space, or poorer households without the ability to compete with cash-flush investors from the city. In general, no compensation was received by the former borrower, although the *alkalo* probably received some form of remuneration through sale of the property (table 5.1).

Table 5.4
Alienated Land, 1993 Peri-Urban Household Survey, The Gambia [a,b]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of plots alienated	10	2	1	3	10	13[c]
Mode of acquisition:						
Spontaneous occupation	10.0	50.0	-	33.3	10.0	15.4
Inherited	-	-	100.0	33.3	-	7.7
Purchased	10.0	-	-	-	10.0	7.7
Given by *alkalo*/*kabilo* head	40.0	-	-	33.3	30.0	30.8
Other	40.0	50.0	-	-	50.0	38.5
Year plot alienated:						
1979-86	10.0	100.0	100.0	66.7	20.0	30.8
1989-93	90.0	-	-	33.3	80.0	69.2
Ownership time (year alienated minus year acquired) (years)	12.2	36.0	9.0	10.3	17.2	15.6
Mode of alienation:						
Sold	20.0	-	-	66.7	-	15.4
Given away	-	-	100.0	33.3	-	7.7
Evicted/taken back	70.0	100.0	-	-	90.0	69.2
Other	10.0	-	-	-	10.0	7.7
Plot alienated to:						
Compound head	-	50.0	-	-	10.0	7.7
alkalo	10.0	-	-	-	10.0	7.7
New settler in village	90.0	50.0	100.0	100.0	80.0	84.6

a. A '-' means zero or negligible.
b. Land alienated by family members in past 10 years. It excludes plots rented-in, borrowed-in, and loaned-in for three-years or less.
c. 11 households had alienated land; 2 households had 2 alienated parcels.

IV. Land Rights

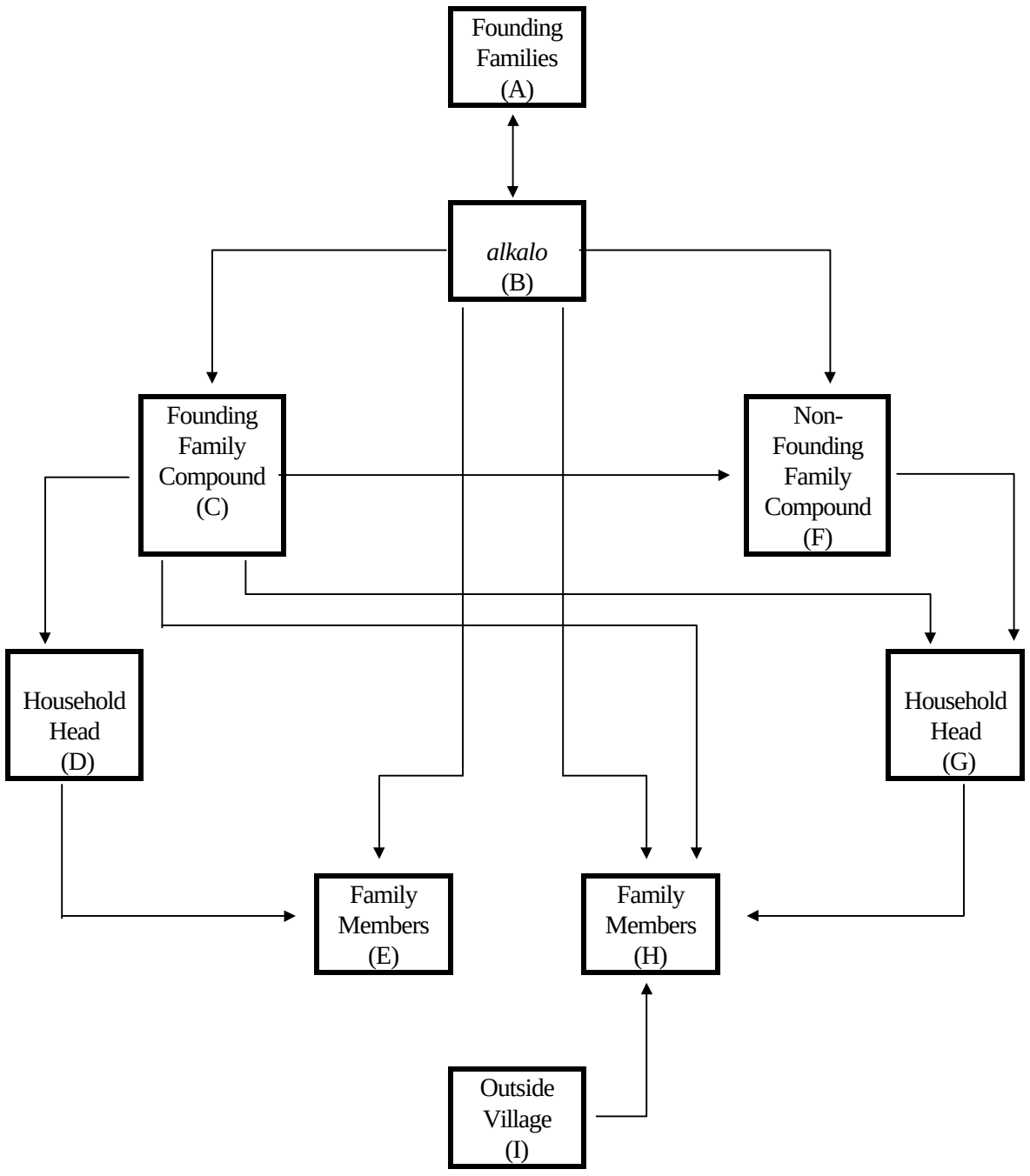
Figure 5.1 depicts the theoretical hierarchy of land rights held by various agents operating in the customary land market in the study area. The *alkalo* (B), as depicted in figure 5.1, is a central figure. S/he may allocate portions of his or her own land to applicants or, if none is available, may request land from other founding families (A), or repossess some portion of a plot formerly given to a non-founding family (F). Founding families have the right to transfer their land to another family or family member within the village or to a newcomer, but as a matter of courtesy will inform the *alkalo* in cases of "minor" transactions, or seek his guidance and the protection of his authority in other transactions where land is at risk of being permanently alienated. A founding family compound (C) and its members (D, E) will normally seek land from the *alkalo* and other founding families, but as indicated in table 5.1 rarely do they seek land from others inside or outside the village. Conversely, a non-founding family compound (F) and its members (G, H) will seek land wherever it can be located regardless of founding family or village status.

A compound (C and F) may comprise one or more households (for example, a father and his brother's). The head of a founding family compound in C (F in the case of a non-founding family) will be the same as the head of household in D (G) in the case of a nuclear household. But in the case of multiple households in one compound, land may be allocated by the *alkalo* to the compound head (C, F) who in turn allocates family land to the household heads (D, G) or other household members (E, H). These transfers are generally known to the household head within the compound, but in some cases private allocations of family members are sought directly from the *alkalo* (or from other founding families through the *alkalo*) without the concurrence of the household or compound head. While founding family members (E) can generally find land from other founding families (by contacting the compound head C, household head D, other founding families A, or the *alkalo* B), members of non-founding families must generally seek land from their head of household or from other founding families.

The above hierarchy depicts superior rights and authority held by the *alkalo* at the top of the diagram and the weakest rights by borrowers within households. Individuals may attempt to seek land from outside the community, but theoretically any borrower would confront the same hierarchical structure, and land rights would tend to be weaker as priority would first be given to village residents in the event land scarcity should emerge.

When acquiring land through this system, agents operating at each level may demand various approvals or authorization depending on the nature of the transaction. A household head may theoretically need to clear any use right or transfer with the compound head (D in the case of a founding family, and F and C in the case of a non-founding family), the *alkalo* (B), or founding family (A). Individual family members may seek authorization from any of the above including the household head. The degree of authorization sought or required will depend on the degree of individualized land rights within the village; in a situation of highly individualized land rights, few authorizations will be sought, or vice versa.

Figure 5.1
Theoretical Hierarchy of Land Rights within the Village



The household head, separate from other family members, was asked which rights s/he could exercise on the private plots of household members under four domains: upland plots, private plots, rice plots, and donor plots. As the household head tends to have the greatest degree of control over communal fields on uplands, one would expect a priori that their land rights would be greatest there. His or her perception of rights would theoretically be lower on the private fields of plot managers as some originate from independent sources outside the household, and would tend to be still lower on rice plots where women exert considerable autonomy over their use and transfer. Donor gardens are composed of land allocated to donor projects by the *alkalo* or one or more of the founding families. Once improvements (wells and fencing) have been made by the donor, the higher land value increases the risk of allocating land to an outsider or those of uncertain reputation. The combination of four factors would thus theoretically tend to lower the influence of household heads over donor plot holdings: women as with their rice plots exert their autonomy over vegetable fields; the cooperative management of women's producer associations act to collectivize land management and access; the allocation of land by one central figure—the *alkalo* or a single family—would require the authorization of all other founding and non-founding families alike in the community; and the very presence of a foreigner donor with the potential to provide upkeep and maintenance of the scheme over time may further act to lessen the bargaining position of the *alkalo* or founding families in making reallocations out of self-interest. Non-founding families generally would require more authorizations at all levels because of the contravening influence of founding families as lessors of borrowed lands.

A. Land Rights of Household Head

The respondent (that is, household head) was asked whether s/he held each of the following categories of rights—plant annual crops, plant fruit or field trees, build a wall or fence around the plot, build a house or warehouse on the plot, bequeath to family member, rent out the plot, and sell the plot. Possible responses included (1) yes, can exercise the right without authorization, (2) yes, but need prior authorization, (3) no, and (4) don't know or uncertain. Results associated with the household head's responses of rights perceptions are tabulated in table 5.5, and the percentage of rights held requiring authorization are reported in table 5.6. A number of important points can be gleaned from the data.

The perceived rights of the household head are highest on upland plots (96.6 percent right to plant annual crops and 63.1 percent right to sell) followed in declining order of importance by rights on private plots (85.5 percent, 48.4 percent), rice plots (78.4, 47.5 percent), and finally donor plots (36.4 percent, 3.6 percent), consistent with the aforementioned hypotheses. As land for donor schemes is generally provided by founding families, one would not expect land rights to be high as the majority of the sample (84 of 120 households) is comprised of non-founding families. Nevertheless it remains striking the extent to which foreign intervention in donor schemes has so clearly alienated the individual use and transfer rights of household heads in the two study villages, even relative to other private plots and within founding families.

Planting annual crops is the most common right reported by household heads in the overall sample (96.6 percent on upland plots) followed by planting fruit trees (76.9 percent), bequeathing plot to heirs (76.9 percent), building a wall (73.8 percent), renting the plot (67.7 percent), and

selling the plot (63.1 percent). Clearly household heads on average perceive fewer transfer rights than use rights, a relationship that consistently holds for private plots, rice plots, and donor plots as well. Nevertheless, while rights to rent-out or sell land appear constrained, a surprisingly high percentage of household heads feel confident in their ability to bequeath land to heirs (the one exception being Sinchu).

Regionally, households in Sinchu on the urban fringe have the fewest rights on upland plots (the only domain where a complete comparison is possible). Household head's in Pirang have fewer rights than in Sanyang for virtually all rights designated and all plot types. The relative land abundance in Sanyang village is obviously playing a pivotal role, but other factors must also be at play. For example, while Pirang has relatively the highest endowment of land suitable for rice production, the rights of household heads are lower than in Sanyang village. Moreover, the rights of household heads to donor plots is much lower in Pirang. The poorly organized and utilized nature of the Sanyang donor scheme compared with the scheme in Pirang is a contributing influence. But one must also conclude that fundamental differences in land tenure institutions between the two villages are affecting land rights and control among the various actors in figure 5.1.

Founding families, regardless of the different plot strata, appear to hold greater land rights, particularly transfer rights, than their non-founding family counterparts. On upland plots, the household heads in founding families perceive greater rights to plant annual crops (100.0 versus 95.0 percent) and sell the plot (91.3 versus 47.6 percent). Similar trends hold for private plots (95.7 versus 78.1 percent and 69.0 versus 31.4 percent) and rice plots (90.9 versus 69.0 percent and 69.0 versus 28.1 percent). Only for transfer rights on donor plots is their a reversal in this trend. No doubt, the fact that founding families and the *alkalo* collectively made the land allocation for the purpose of establishing the donor scheme, makes it difficult for any one family to withdraw a portion, particularly when a foreign institution is involved.

B. Authorization of Rights

The corollary of table 5.5 on rights possession is table 5.6 reporting the percentage of those rights held which require prior authorization. No attempt was made in the survey to ask from whom the authorization is required. Household heads could conceivably require consultation with the compound head, *alkalo*, other founding families (particularly a non-founding family), or even plot managers. The data in table 5.6 are revealing in a number of important ways.

First, exertion of use rights involves a relatively high degree of consultation. While 96.6 percent of the household head's in table 5.5 express the right to plant annual crops on upland areas, 41.1 percent of this number would require prior authorization. Similar trends hold with respect to private plots (85.5 percent rights, 53.2 percent authorization) and rice plots (78.4 percent, 45.0 percent). Fewer household heads reported the right to transfer upland plots in table 5.5. However, of those perceiving the right, few felt the need to consult others in making the transfer (only 27.3 percent and 24.4 percent of those heads perceiving the right to rent-out land or sell uplands required authorization).

Table 5.5
Household Head's Perception of Own Land Rights to Members Plots,
1993 Peri-Urban Household Survey, The Gambia [a,b]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Upland plots (% hh heads w/ right):						
Plant annual crops	100.0	90.5	100.0	100.0	95.0	96.6
Plant tree	37.5	90.5	89.3	95.7	66.7	76.9
Bequeath plot to heirs	31.3	85.7	96.4	95.7	66.7	76.9
Build wall	37.5	81.0	89.3	91.3	64.3	73.8
Rent plot	37.5	71.4	82.1	91.3	54.8	67.7
Sell plot	31.3	71.4	75.0	91.3	47.6	63.1
Private plots of family members (% hh heads w/ right): [c]						
Plant annual crops	-	79.3	92.3	95.7	78.1	85.5
Plant tree	-	81.3	87.5	96.6	74.3	84.4
Bequeath plot to heirs	-	62.5	90.6	79.3	74.3	76.6
Build wall	-	65.6	81.3	82.8	65.7	73.4
Rent plot	-	40.6	75.0	72.4	45.7	57.8
Sell plot	-	34.4	62.5	69.0	31.4	48.4
Rice plots (% hh heads w/ right):[c]						
Plant annual crops	-	64.0	92.3	90.9	69.0	78.4
Plant tree	-	62.1	90.6	86.2	68.8	77.0
Bequeath plot to heirs	-	62.1	90.6	82.8	71.9	77.0
Build wall	-	55.2	84.4	75.9	65.6	70.5
Rent plot	-	34.5	78.1	72.4	43.8	57.4
Sell plot	-	34.5	59.4	69.0	28.1	47.5
Donor plots (% hh heads w/ right):[c]						
Plant annual crops	-	16.7	60.0	42.9	25.0	36.4
Plant tree	-	14.3	57.1	42.1	22.2	35.7
Bequeath plot to heirs	-	7.1	7.1	5.3	11.1	7.1
Build wall	-	14.3	7.1	10.5	11.1	10.7
Rent plot	-	7.1	7.1	5.3	11.1	7.1
Sell plot	-	7.1	-	5.3	-	3.6

a. A '-' means zero or negligible.
b. Household head was asked which rights s/he can exercise on the plots of all family members including his or her own.
c. No rice plots and donor vegetable schemes in Sinchu village. Private plots are few in number.

Table 5.6
Percentage of Household Head's Land Rights Requiring Authorization, 1993 Peri-Urban Household Survey, The Gambia [a,b]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Upland plots:						
Plant annual crops	68.8	36.8	23.8	11.1	55.3	41.1
Plant tree	50.0	36.8	20.0	9.1	46.4	30.0
Bequeath plot to heirs	40.0	38.9	18.5	9.1	42.9	28.0
Build wall[c]	50.0	35.3	20.0	4.8	48.1	29.2
Rent plot	50.0	26.7	21.7	4.8	47.8	27.3
Sell plot	40.0	26.7	19.0	4.8	45.0	24.4
Private plots of family members:						
Plant annual crops	-	69.6	37.5	40.9	64.0	53.2
Plant tree	-	84.6	32.1	50.0	65.4	57.4
Bequeath plot to heirs	-	90.0	34.5	43.5	69.2	57.1
Build wall[c]	-	90.5	26.9	45.8	65.2	55.3
Rent plot	-	84.6	25.0	38.1	56.3	45.9
Sell plot	-	100.0	15.0	40.0	54.5	45.2
Rice plots:						
Plant annual crops	-	56.3	37.5	40.0	50.0	45.0
Plant tree	-	72.2	27.6	36.0	54.5	44.7
Bequeath plot to heirs	-	88.9	27.6	37.5	65.2	51.1
Build wall[c]	-	87.5	22.2	31.8	61.9	46.5
Rent plot	-	80.0	20.0	28.6	50.0	37.1
Sell plot	-	80.0	5.3	25.0	44.4	31.0
Donor plots (% hh heads w/ right):						
Plant annual crops	-	100.0	83.3	83.3	100.0	87.5
Plant tree	-	100.0	87.5	87.5	100.0	90.0
Bequeath plot to heirs	-	100.0	100.0	100.0	100.0	100.0
Build wall[b]	-	100.0	100.0	100.0	100.0	100.0
Rent plot	-	100.0	100.0	100.0	100.0	100.0
Sell plot	-	100.0	-	100.0	-	100.0

a. A '-' means zero or negligible.

b. If household head perceives the ability to exercise a right on the private plots of family members, s/he was further asked if exercising the right required authorization of local officials.

c. Similar percentages obtained for right to build house.

Second, only for upland crops do data permit comparisons across the three village sites. Based on these data, the need for authorization is highest in Sinchu village and lowest in Sanyang village. For all remaining plots (private, rice, and donor), however, levels of authorization required in Pirang were high in absolute terms and relative to Sanyang village. Thus, in Pirang, not only are the head of household's rights over private fields and rice plots lower than in Sanyang, but greater degrees of authorization are required to enforce the rights that are in possession.

Third, the household heads of founding families require virtually no authorization on upland fields that fall under the control of the household head. However, their rights decline over the management of private plots and rice plots. Household heads continue to assert their possession of rights, but requirements for authorization increase markedly relative to upland fields. With respect to donor vegetable gardens, household heads regardless of location or founding family status would seek authorization before making any land use or transfer decision, reinforcing the view that donor schemes have unwittingly acted to alienate land from the normal processes of land allocation and reallocation within the community.

C. Land Rights of Plot Managers

In addition to queries addressed to the household head about his or her land rights to the plots of other managers within the household, plot managers were individually asked about their rights to the plots they manage. Results are tabulated in table 5.7. The data suggest a high degree of individual rights in the overall sample, and particularly so in Pirang and Sanyang villages. Private plot managers in founding families clearly perceive more rights than those in non-founding families. Given the allocations of land from the *alkalo* and compound/household head to plot managers, the high percentage of plot managers who perceive the right to rent-out the land or sell the land is quite remarkable. Also striking is the fact that few plot managers indicating rights possession feel compelled to seek authorization to exercise those rights relative to household heads in table 5.6. For example, plot managers of non-founding families who assert possession of the six basic rights in table 5.7, indicated that authorization was required in only 15.2 to 25.9 percent of the cases, depending on the specific right. However, the levels of authorization required by the non-founding family household heads for the same rights (on private plots) in table 5.6 ranged between 54.5 and 69.2 percent. Rather than households maintaining strict control over the actions of plot managers, these data suggest that private managers have considerably more freedom and tenure security than the theoretical model in table 5.1 would seem to imply.

Table 5.7
Land Rights of Family Members to Individual Plots, 1993 Peri-Urban Household Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Rights (with and w/o authorization needed) (A):						
Improve water retention structure	43.4	87.5	82.9	84.8	70.2	75.7
Plant fruit or field trees	41.3	80.4	81.9	83.6	64.9	72.0
Bequeath to family member	41.3	77.2	82.4	79.3	65.7	70.9
Build wall or fence	41.3	76.9	76.2	80.2	61.4	68.5
Build house or warehouse	41.3	67.8	75.8	73.4	59.2	64.6
Rent out	41.3	54.1	74.0	68.8	52.1	58.4
Sell plot	41.3	40.7	55.5	53.1	42.0	46.2
Percentage of rights requiring authorization (% of A):						
Plant fruit or field trees	1.7	38.6	34.4	43.4	23.0	31.9
Build wall or fence	1.7	38.2	30.1	42.1	20.2	29.9
Build house or warehouse	1.7	41.0	30.2	43.1	21.3	30.7
Bequeath to family member	1.7	38.1	35.8	41.0	25.9	32.3
Rent out	1.7	44.2	32.7	39.8	25.7	32.0
Sell plot	1.7	44.2	23.8	41.2	15.2	26.6
Improve water retention structure	1.6	65.5	33.5	51.8	38.9	44.4

a. A '-' means zero or negligible.

Table 5.8 relates land rights and authorization to principal land use categories. As indicated in chapter 3 (table 3.1), grains and orchards are mainly cultivated by men, groundnuts by men and to a lesser extent by women, and rice and vegetables almost entirely by women. The fewest rights to plant trees, build fences, and improve water retention structures are associated with upland plots where cereals and groundnuts are normally cultivated. The greatest rights to undertake these land uses are located on rice, vegetable gardens, and orchards. Most rice plot managers (that is, women) perceived the right to bequeath land to heirs and to a lesser extent for vegetables. However, the right to rent-out land or sell land declines for all land use categories except orchards, which are normally purchased and then leased. Despite the fact, that women generally perceive higher land rights, many feel obliged to consult with others in the decision as opposed to males who perceive fewer rights but tend to act autonomously on their decisions.

Table 5.8
Land Rights of Plot Managers by Type of Crop, 1993 Peri-Urban Household Survey, The Gambia [a]

	Grains[b]	Rice	Groundnuts	Gardens	Orchards
Number of plot observations	103	122	81	160	14
Rights (with and w/o authorization needed) (A):					
Plant fruit or field trees	67.0	86.9	44.5	72.5	100.0
Build wall or fence	63.2	82.7	43.2	65.0	100.0
Build house or warehouse	62.1	77.0	41.9	55.6	100.0
Improve water retention structure	70.9	90.2	48.2	80.6	100.0
Bequeath to family member	67.0	87.7	44.5	68.1	100.0
Rent out	61.1	64.8	38.3	50.1	100.0
Sell plot	54.3	43.5	32.1	30.6	100.0
Percentage of rights requiring authorization (% of A):					
Plant fruit or field trees	21.8	44.3	38.9	41.4	28.6
Build wall or fence	18.5	42.6	37.0	38.5	28.6
Build house or warehouse	20.3	43.6	38.2	41.5	28.6
Improve water retention structure	30.2	67.3	51.2	56.6	28.6
Bequeath to family member	23.1	43.9	38.9	40.4	28.6
Rent out	20.6	49.4	38.6	42.5	28.6
Sell plot	23.2	35.9	34.6	40.8	28.6

a. A '-' means zero or negligible.
b. Maize, millet, and sorghum.

CHAPTER 6

FARM INVESTMENT AND PLOT INCOME

I. Introduction

Previous chapters examined land endowments and access to financial resources and employment opportunities. Chapter 4 in particular looked at the contribution of horticultural activities within the overall structure of household income and employment. This chapter focuses in greater detail first on land improvements that affect land quality and productivity, and secondly on farm management practices and the structural characteristics of landholdings that influence plot level income and investment. Detailed data are presented on plot level characteristics and investments that affect plot quality, land utilization, and tree crop establishment. Detailed farm management data are also presented on value of horticultural crop production, marketed surplus, input expenditures, control of income within the household, and marketing arrangements. Land rights do not appear to be a constraint to the establishment of trees on compound plots where households have long-term secure rights. However, significant differences in tree crops between owned and borrowed fields weakly suggest that lack of ownership rights for tenants is constraining investment in trees. The contribution of vegetables to household income is heavily determined by access to land and the capital necessary for deep wells for irrigation. Donor schemes have made an important contribution to expanding the supply of water for irrigated upland cultivation, but a substantial amount of vegetables are still produced on private plots where water control can be problematic. Founding families appear to have land to provide to such schemes, but lack the capital to make complementary improvements.

II. Plot Quality

Land quality indicators in table 6.1 were carefully chosen in discussions with trained field personnel as factors farmers readily recognize and use to assess land quality: (1) location of plot, whether in the compound, near the compound, or in outer fields; (2) soil type; (3) soil fertility; and (4) water access. In addition, presence of rice cultivation further indicates lowland status. Plot managers were asked to individually assess each plot they controlled within the household. Their responses (based on number of plots not area) are tabulated in table 6.1 along with an assessment of land value.

A priori households with abundant land resources—that is, founding families and Sanyang village—would be expected to have a greater percentage of their landholdings further removed from their compounds in the village, while the opposite would be expected near the urban fringe. On average for the entire sample, 19.3 percent of plots constitute the family's compound, 28.9 percent are plots lying near the compound, and 51.5 percent are considered "outlying fields." Sinchu village indeed has the highest concentration of land in the compound (43.4 versus 15.7 percent in Pirang and 10.2 percent in Sanyang), reflecting the smaller number of holdings per household in the village. Households in Sanyang have the highest percentage of plots in outlying areas (80.9 versus 33.9 percent in Pirang) reflecting in part the nucleated settlement of Pirang village. In Sinchu village, where settlement has been very dynamic and the *alkalo* is dispossessing land, a unique situation is evident—households have a few plots near the compound (10.1 percent)

but most (46.5 percent) are located further away as plot managers have resorted to borrowing or acquiring land from other villages.

Table 6.1
Descriptive Plot Characteristics, 1993 Peri-Urban Survey, The Gambia [a,b]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Location of plot (% of total):						
In the compound	43.4	15.7	10.2	12.7	24.1	19.3
Near the compound	10.1	50.5	8.8	40.4	20.7	28.9
In the outer fields	46.5	33.9	80.9	46.9	55.2	51.8
Soil type:						
Kenye koyo/wulengo	50.0	25.0	21.0	24.1	31.5	28.4
Kenye fingo	6.5	7.1	12.8	9.9	8.1	8.9
Banko fingo	43.5	28.5	47.5	36.1	38.8	37.7
Datto	-	38.1	18.7	28.5	21.5	24.4
Combination	-	1.3	-	1.5	-	.6
Soil fertility:						
Very fertile	2.5	4.2	1.8	2.6	3.5	3.1
Fertile	76.7	64.7	85.8	77.7	71.4	74.0
Infertile	20.8	31.1	12.4	19.8	25.1	22.9
Principal water source:						
Rainfall	96.5	56.7	68.0	61.5	72.0	67.5
Shallow dirt well	-	20.8	24.2	21.2	16.2	18.3
Deep dirt well	-	9.0	2.3	5.5	4.9	5.1
Concrete lined well	-	6.1	4.1	7.3	2.2	4.3
Other	3.5	7.4	1.4	4.4	4.9	4.7
Asking price (D000/ha): [c]						
Upland plots	227.5	39.2	62.5	56.1	121.2	94.9
Rice plots	-	39.7	178.3	86.5	68.1	78.3
Garden plots	-	37.3	7,435.1	254.4	4,033.2	1,995.6

a. A '-' means zero or negligible.
b. Includes compound and fallow plots.
c. Excludes compound and fallow plots for which no area estimates were taken.

All other things held constant, nearness of land to the family compound is considered preferable to plots in outlying fields, due to less threat of theft and lower crop losses and labor costs. Founding families would seem to be better positioned in this regard, although there is almost certainly endogeneity involved between date of settlement and plot location. The *alkalo* would tend to allocate compound plots to newcomers in or near the village perimeter. Founding families too, to reduce labor costs and losses, would allocate plots to newcomers on the fringes of already cultivated land. As indicated in table 6.1, 55.2 percent of the plot holdings of non-founding families is classified as outlying fields versus 46.9 percent for founding families.

With respect to soil structure (soil type) in table 6.1, six types of soils are widely recognized as having distinguishable characteristics that affect their suitability for specific crops.

- *Kenye koyo* is a light colored sandy soil with good infiltration and retention characteristics. It is inherently of low soil fertility but responds well to fertilizer. It is preferred for groundnuts because of easy lifting, but a fertility amendment is needed for cereals to achieve good yields.

- *Kenye wulengo* is a red sandy soil that possesses the same characteristics of *kenye koyo*.

- *Kenye fingo* is a dark, fine-textured sandy soil that tends to dry more quickly than *kenye koyo*/*wulengo*, making it more difficult to lift groundnuts. Higher inherent fertility makes it the preferred soil for cereals but fertilizer response tends to be lower.

- *Banko fingo* is a dark sandy clay or clay loam that tends to be impermeable with poor moisture retention. It is fertile and therefore suitable for cereals, although it is slightly drought prone. Difficulty may be experienced lifting groundnuts as it dries toward the end of the season.

- *Datto* is a heavy clay soil that is impermeable and drought prone. It tends to dry hard at the end of the season and is generally considered a problem soil. Farmers prefer not to grow groundnuts since lifting can be extremely difficult. Sorghum is the preferred crop on this soil type.

- *Barre messeng* means small rocks and is a gravely soil that is usually not cultivated.

Sinchu village has the highest fraction of sandy or sandy clay loams. Pirang has the highest fraction of *datto* or problem soils, while Sanyang has the highest proportion of sandy clay or clay loams (*banko fingo*). Founding families appear to have a low proportion of sandy or sandy clay soils. However, since very few founding families reside in Sinchu village, their soil endowments more closely mirror the soil endowments of Pirang and Sanyang villages. Overall in the study area, 37.3 percent of plots were classified as sandy soils, 37.7 percent as fine-textured sandy soils, 24.4 percent as heavier clay soils, and 0.6 percent as some combination of the above.

Assessments of soil fertility in table 6.1 tend to be somewhat monotonic and imply that differences in soil quality (evaluated in terms of productivity) are not greatly different among the

three sites. Soils around Sanyang tend to be the most fertile, while soils around Pirang tend to be the least fertile due in part to problems of salt intrusion in rice fields in recent years (see annex A) and to its greater endowments of lower quality '*datto*' soils. Founding families have slightly better landholdings than non-founding families, although differences are not great.

Access to water is a key factor in explaining differences in productivity between the three sites. Plot managers were asked to state the principal source of water for the holding (residential/compound plots included). The vast majority of holdings in Sinchu village are dependent on rainfall. Pirang village resting on the edge of The Gambia river has substantial areas under irrigated rice cultivation, thus the main reason for the low percentage of holdings dependent on rainfall (56.7 versus 68.0 percent in Sanyang). However, it also has the highest percentage of plots with deep dirt wells (9.0 percent) and concrete lined wells (6.1 percent), due in part to the donor garden situated on the perimeter of the village; its location near to The Gambia river also suggests the possibility of a higher water table making deep wells feasible.

As a final indication of plot value, each plot manager was asked the price they would accept in selling each plot under their management if they were to sell it. This question would seem highly hypothetical, but as Roth, Boucher, and Francisco (1994) have shown in a comparable peri-urban area in Maputo characterized by land market restrictions and legal uncertainty over land rights, such questions about the "reservation" price proved to be remarkably good indicators of price signals in the emerging land market. Asking prices per hectare are reported in table 6.1 for three types of land—upland plots, rice plots, and garden plots. Prices were also asked for compound plots but an analysis of per-hectare land values is not possible due to lack of area measurements.

The differences among strata are striking. Sinchu village has the highest reported land value for upland fields (D227,500/ha or US$27,410/ha versus D39,200/ha) reflecting the urban pressures and the high demand for residential property impinging on the village. Pirang village has the lowest reported land value regardless of land type. Land values in Sanyang, despite its more rural location, are higher than in Pirang village due probably to the area's more fertile soils and purchases of residential properties by newcomers from Banjul/Serekunda in recent years. The prices for garden plots appear outlandish and are no doubt upwardly biased by the division of reported plot values by the very small plot sizes for vegetable plots (.06 ha on average for all numerous small plots combined). Prices of this magnitude would not be observed as the shadow price for vegetable land would tend to decline rapidly with increases in plot size as the availability of labor becomes constraining. Nevertheless, the data strongly suggest that vegetable plots are highly valued relative to either upland plots or rice plots by a substantial margin.

III. Land Use

Tables 3.9 and 3.10 in chapter 3 analyzed principal land use according to number of plots. The land use data in table 6.2 examine the average field sizes of fields cultivated and the principal uses of cultivated crop area. The latter estimates differ from the earlier estimates in two important ways. First, they exclude compound land, fallow land, and uncultivated land for which no area estimates were taken. Second, crops with the largest crop area receive a greater proportional weighting,

Table 6.2
Land Utilization, 1993 Peri-Urban Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Field Sizes (ha/crop):[b]						
Millet	.31	.83	1.22	.69	1.16	.89
Groundnut	.50	.57	1.53	.69	.65	.68
Fruit orchards	.08	.54	.48	.49	.47	.48
Sorghum	.73	.42	.35	.60	.42	.56
Cassava	.19	.26	.53	.37	.41	.38
Rice (major plots)	-	.07	.19	.08	.14	.11
Private garden (major plots)	.01	.03	.17	.08	.08	.08
Maize	.15	.09	.32	.14	.30	.16
Donor garden (major plots)	-	.02	-	.01	.01	.01
Principal land use (ha/hh):[c]						
Millet	.06	.66	.79	.32	.93	.50
Groundnut	.41	.45	.52	.48	.40	.46
Cassava	.05	.03	.22	.10	.10	.10
Rice	-	.14	.17	.05	.23	.10
Private garden (vegetables)	-	.07	.18	.05	.13	.08
Maize	.11	.01	.04	.06	.04	.05
Fruit orchards	-	.10	.01	.02	.07	.03
Sorghum	.02	.01	.01	.02	.01	.01
Donor garden (vegetables)	-	.01	-	-	.01	-
Total area of principal crops [d]	.65	1.48	1.94	1.10	1.92	1.33
Principal land use (% of total cultivated area): [c]						
Millet	9.2	44.6	40.7	29.1	48.5	37.5
Groundnut	63.1	30.4	26.8	43.7	20.8	34.6
Cassava	7.7	2.0	11.3	9.1	5.2	7.5
Rice	-	9.5	8.8	4.5	12.0	7.5
Private garden (vegetables)	-	4.7	9.3	4.5	6.8	6.0
Maize	16.9	0.7	2.1	5.5	2.1	3.8
Fruit orchards	-	6.7	0.5	1.8	3.6	2.3
Sorghum	3.1	0.7	0.5	1.8	0.5	0.8
Donor garden (vegetables)	-	0.7	-	-	0.5	-

a. A '-' means zero or negligible.
b. Average field size for only those fields and plots which contain the respective crop.
c. Average land area devoted to crops based on all households in the sample, but excluding compound, fallowed and uncultivated plots for which no area estimates were taken.
d. Due to missing area values for field sizes (these differ from plot sizes for which area information is more complete), the sum of total crop area will differ from farm size estimates reported in table 3.6.

whereas principal land uses in tables 3.9 and 3.10 implicitly give greater weight to number and dispersal of holdings.

Households in Sanyang (1.94 ha) and non-founding families (1.92 ha) have the largest areas of cultivated land. The largest field sizes are associated with grains—principally millet—and groundnuts. The area of private gardens, rice, and donor garden (major) plots are much smaller, and donor garden plots in particular, are very small. With respect to the overall sample, field crops—millet (37.5 percent) and groundnuts (34.6 percent) comprise the largest share of cultivated area. Rice and cassava constitute another 7.5 percent of crop area, followed by private vegetable gardens (6.0 percent). Donor gardens, in area terms, are far smaller than the vegetable area under private gardens and in no village represented more than 0.7 percent of total household cultivated area.[25] These estimates, however, mask considerable regional variation. Groundnuts and maize predominate in Sinchu village. Fruit orchards are nearly entirely concentrated in Pirang village (6.7 percent). Despite the greater number of rice holdings in Pirang village, the proportion of rice in the crop mix is nearly equal between Pirang and Sanyang. The area of private gardens in Sanyang (.18 ha/hh) is over twice as large as in Pirang (.07 ha/hh).

IV. Fixed Land Improvements

Theoretically, more secure land rights ought to instill greater incentives to make improvements in the land, all else equal. These improvements in turn, depending on the type of investment, affect productivity and resource conversation. However, the phrase "all else equal" masks a great number of factors that influence the investment decision. Orchards tend to be established on larger plots of land to achieve economies of size in marketing and transport. Residential land uses tend to be more closely associated with upland soils and the establishment of fencing or walls. Uplands and the site upon which the compound is located are generally more in need of a deep well than lowlands. Donor interventions, including the site and location of donor schemes, influence the construction of cement wells. Market access, which influences the purchase of complementary inputs (labor hiring or purchase of cement or fencing material) is generally enhanced with improvements in wealth and non-farm income. Hence, the presence of plot improvements tends to be highly dependent on plot characteristics and site factors that might be highly correlated with land right perceptions. Hence, until more detailed econometric studies are conducted, any assessment of linkages between land rights and improvements should be interpreted with caution.

Each plot manager was asked to identify the presence or absence of five common investments in the study areas:

- Fallow: Percent of total plots fallowed in the 1991/92 season;

[25] It is surprising that Sanyang village with a donor scheme directly at its outskirts showed no land use in the spring of 1993. Pirang, on the other hand, with a scheme comparable in size was utilized, and this was apparent upon visits to both research sites. Women in Pirang village were very actively engaged in lifting water and irrigating crops, while little activity appeared to surround the Sanyang donor scheme.

- Continuous manuring: Whether or not the plot was manured by a tethered herd for 3 consecutive seasons;

- Cement wall: Whether or not a cement wall was constructed around the border of the plot;

- Fencing: Whether or not a barbed wire fence, live fence, or hard wood fence (*xed*, in Wolof, meaning a specific type of hard wood which can be quite expensive) was constructed around the plot's perimeter; and

- Deep dirt well: A deep well (*teen* in Wolof), which is more costly than the shallow wells found in gardens (*sean* in Wolof).

Each plot manager was also asked whether the improvement existed on the plot, by whom the improvement was made, when the improvement was made relative to plot acquisition, and whether authorization was sought from any individual other than the respondent (the plot manager in the vast majority of the cases). The responses to these questions are tabulated in table 6.3.

A. Fallowing

Of the 614 major plots for which complete information is available in the overall sample, 11.4 percent were fallowed or uncleared in the 1991-92 cropping season.[26] Fallowing as a percentage of plots held tends to be nearly equal in Pirang and Sanyang villages, but length of fallow tends to be nearly five times greater in Pirang village (8.4 years versus 1.8 years) discounting earlier assertions made of relative land abundance in Sanyang village. Founding families, as in table 3.9, appear to have greater percentage of plots under fallow (13.7 versus 9.7 percent), but the duration of fallow is identical with the fallow plots held by non-founding families.

B. Continuous Manuring

The greater livestock holdings of founding families (table 3.4) are manifest in continuous manuring rates in table 6.3. Around 13.5 percent of all plots held by founding families had been manured by a tethered herd for three consecutive years compared with only 2.9 percent of the plots held by non-founding families.[27] Rates of continuous manuring are highest in Sanyang village (9.0 percent), followed closely by Pirang village (7.9 percent), and far behind by Sinchu village (2.8 percent). Fallowing and livestock ownership thus appear to be intimately linked. Fallowing provides

[26] The incidence of fallowing reported here differs from earlier figures in table 3.10 in two ways: fallowing rates here are for the 1991-92 season while in those in table 3.10 are for the 1992-93 season; and the sample size here is substantially smaller due to a sizable numbers of plot (for example, compounds) where fallowing is not practiced.

[27] These data raise the question of why a market in manure or paddocking does not emerge where non-founding families hire herds to graze and deposit manure on their plots.

Table 6.3
Fixed-Place Land Improvements, 1993 Peri-Urban Survey, The Gambia [a,b]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Fallow:						
Plots fallowed/uncleared in 1991/92 season (% of plots)	3.6	12.6	13.9	13.7	9.7	11.4
Years fallowed consecutively (no.)	-	8.4	1.8	4.4	4.4	4.4
Continuous manuring:						
Plot manured by tethered herd for three consecutive years (% yes)	2.8	7.9	9.0	13.5	2.9	7.4
Cement wall around plot:						
Percent plots w/ improvement (%)	5.1	2.7	2.9	4.0	2.6	3.2
Improvement made by (%):						
Household head	50.0	87.5	37.5	61.5	55.6	59.1
Plot manager	50.0	12.5	37.5	30.8	33.3	31.8
Other family members	-	-	12.5	7.7	-	4.5
Other	-	-	12.5	-	11.1	4.5
Time improvement made (%):						
Before plot acquisition	-	-	-	-	-	-
After acquisition	100.0	100.0	50.0	69.2	100.0	81.8
Both	-	-	50.0	30.8	-	18.2
Permission obtained from (%):[c,f]						
Household head if not respondent	16.7	-	25.0	7.1	22.2	13.0
Compound head if not respondent	50.0	-	-	-	33.3	13.0
Plot manager if not respondent	16.7	11.1	-	14.3	-	8.7
alkalo	-	-	-	-	-	-
Village authority	-	-	12.5	-	11.1	4.3
Fence built around plot:[d]						
Percent plots w/ improvement (%)	9.4	31.6	19.5	24.0	22.6	23.2
Improvement made by (%):						
Household head if not respondent	81.8	41.9	60.4	31.3	65.9	50.7
Plot manager if not respondent	9.1	33.3	12.5	37.3	15.3	25.0
Other family members	-	2.2	8.3	-	7.1	3.9
Other	9.1	22.6	18.8	31.3	11.8	20.4
Time improvement made (%):						
Before plot acquisition	-	12.9	25.0	14.9	16.5	15.8
After acquisition	90.9	86.0	62.5	79.1	78.8	78.9
Both	9.1	1.1	12.5	6.0	4.7	5.3

(continued)

Table 6.3
Continued: Land Improvements[a,b]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Permission obtained from (%):[c,f]						
Household head if not respondent	27.3	16.3	12.5	9.2	20.9	15.9
Compound head if not respondent	9.1	1.1	-	-	2.3	1.3
Plot manager if not respondent	9.1	5.4	2.1	9.2	1.2	4.6
alkalo or *kabilo* head	-	15.2	2.1	13.8	7.0	9.9
Village authority	9.1	5.4	14.6	15.4	3.5	8.6
Deep dirt well dug on the plot:[e]						
Percent plots w/ improvement (%)	10.2	20.2	12.9	16.4	15.2	15.7
Improvement made by (%):						
Household head if not respondent	50.0	31.7	66.7	33.3	52.6	44.1
Plot manager if not respondent	25.0	45.0	10.0	40.0	26.3	32.4
Other family members	8.3	1.7	3.3	-	5.3	2.9
Other	16.7	21.7	20.0	26.7	15.8	20.6
Time improvement made (%):						
Before plot acquisition	8.3	5.0	30.0	4.4	19.3	12.7
After acquisition	91.7	90.0	63.3	86.7	78.9	82.4
Both	-	5.0	6.7	8.9	1.8	4.9
Permission obtained from (%):[c,f]						
Household head if not respondent	-	15.3	30.0	15.6	19.6	17.8
Compound head if not respondent	41.7	-	-	6.7	3.6	5.0
Plot manager if not respondent	-	8.5	-	8.9	1.8	5.0
alkalo or *kabilo* head	-	20.3	3.3	17.8	8.9	12.9
Village authority	16.7	-	13.3	8.9	3.6	5.9

a. A '-' means zero or negligible.
b. Either household head or plot manager is the respondent.
c. Individuals other than the household head or plot manager.
d. Barbed wire fence, live fence, or hard wood fence (*xed* in Wolof—a specific type of hard wood which can be quite expensive).
e. A deep well (*teen* in Wolof) which is more costly than the shallow wells found in gardens (*sean* in Wolof).
f. Columns do not sum to 100% as some household heads or plot managers obtained no permission while others do so from multiple parties.

an important source of pasture, while paddocked livestock in the dry season provide an important source of manure.[28]

C. Cement Wall

Only 3.2 percent of all plots in the overall sample are encircled by a cement wall with the highest rates being observed in Sinchu (5.1 percent) and by founding families (4.0 percent). The vast majority of these improvements were made by the household head (59.1 percent) or the plot manager (31.8 percent), although a surprisingly large number were made by other family and non-family members, particularly in Sanyang village and by non-founding families. Improvements made by other family and non-family members in Sanyang village is due in part to some improvements having been made by the previous owners prior to acquisition. However, with respect to non-founding families, all improvements were made after acquisition, implying that outside money is being funneled into the community for sake of enclosure or construction of residential properties. Authority for the improvements, when sought, tended to be acquired from the household head, plot manager, or compound head with the exception again of Sanyang village and the non-founding families (in 12.5 percent and 11.1 percent of these strata respectively, permission was acquired from village authorities, generally meaning the *alkalo* or founding families).

D. Fencing

Over 23.2 percent of all plots in the overall sample were fenced with durable materials, representing a fairly high degree of enclosure in the study area. The highest rates are found in Pirang (31.6 percent) and Sanyang (19.5 percent), and rates of fencing are nearly identical among founding and non-founding families. The household head (50.7 percent) or plot manager (25.0 percent) made the largest share of improvements, although 20.4 percent were made by non-family members. The latter figure can largely be attributed to the fact that the improvements were made before acquisition in 15.8 percent of the cases, the majority of these occurring in Pirang and Sanyang villages. Obtaining permission to build a fence is more of a prerequisite than in the case of earlier improvements. Overall, the authority of the *alkalo* was required in 9.9 percent of the improvements, and from village authorities in 8.6 percent of the cases. Obtaining permission of the *alkalo* or *kabilo* head was particularly high in Pirang (15.2 percent), and among founding families (13.8 percent *alkalo*, and 15.4 percent village authorities). One would have expected a priori that non-founding families would have needed a higher rate of authorization, but the fact that a greater percentage of their fields are in outlying areas (table 6.1) may have obviated this need. Conversely, the fact that a greater percentage of founding family plots are near the compound, combined with the felt need of founding families to graze and paddock their animals near the village in the dry season, increases the externalities of enclosure through precluding range for grazing. Founding families thus appear to be managing costs associated with these externalities by carefully establishing rules regarding the establishment of fencing.

[28] Livestock in the wet season are grazed on communal lands.

E. Deep Dirt Well

Around 15.7 percent of plots in the sample have one or more deep dirt wells located somewhere on the plot. Rates of improvement tend to be highest in Pirang (20.2 percent) and lowest in Sinchu (10.2 percent). The difference between founding and non-founding families is negligible. The vast majority of improvements again were made post-acquisition, although a sizable percentage (12.7 percent before and 4.9 percent both before and after) involved improvement by another group or individual. Among all the previous improvements mentioned, rates of authorization were highest in association with well establishment. Of all improvements made, 12.9 percent required the authorization of the *alkalo* or *kabilo* head and 5.9 percent required the authorization of the Village authority. Again, rates of permission by non-founding families is lower than among founding families.

In general, rates of investment in the specific improvements evaluated show that households are investing in the land, and for certain investments—fallowing, manuring, fencing and wells—the incidence is considerable. Aside from manuring, which reflects the greater livestock wealth of founding families, rates of investment are not markedly different among founding and non-founding families. Each of these investments would have a short-to intermediate-term life span. Based on the data presented it would not appear that insecurity of land rights by borrowing families are posing a major constraint. Sinchu village is the exception. Whether comparing manuring, fallowing, fencing, or wells, the level of improvements in Sinchu village is markedly low compared with the other village sites. The dynamics of Sinchu village are highly complex. Households do not have secure rights. Because of tight land scarcity, households interested in expanding their holdings must seek land in outlying areas, sometimes in adjacent villages. Some residents moving to the area make the necessary improvements to establish a claim—a cement foundation—but continue to reside in the city saving funds to complete the dwelling. Separating the influence of land rights from the multitude of other factors at play would be difficult.

V. Fruit Tree Investment

Secure land rights are particularly important for establishment of tree crops whose income stream accrues over a long time horizon. Yet as the recent literature on tree tenure in sub-Saharan Africa points out, tree plantings in themselves can act to assert long-term permanent claims to land (Raintree 1987). This may lead to situations where landholding groups act decisively to destroy trees in cases of planting by tenants (Schroeder, LTC seminar, 1991). The analysis of land rights in previous sections point out two possible situations where insecure land rights may be constraining horticultural investment.

- Land rights by landholding groups have greater breadth (chapter 5) and are of longer duration than for tenants. Hence, hypothetically, one would expect greater planting of tree crops by founding families than non-founding families.

- Founding families as the principal landholding groups would be reluctant to let borrowing families plant trees on plots borrowed-in out of concern that borrowing would lead to eventual appropriation by tenants. Hence, one would expect less tree cultivation in the

case of plots borrowed-in or borrowed-out, than plots permanently held and managed by the family.

A. Incidence of Tree Plantings

Each plot manager in the sample was asked to confirm the presence or absence of five categories of trees on each major plot under his or her management—cashew trees, lime trees, orange trees, mango trees, and other trees. In addition, the respondent was asked the number of each type of tree, amount of fruit income and sales, where and to whom the produce was sold, type of marketing arrangement, and person(s) controlling the income from sales. Data on presence or absence of trees on major plots by village and founding family status are presented in table 6.4 for four categories of plots—compound plots, plots near the compound, plots in outlying areas, and all plots combined, and in table 6.5 on borrowing status and gender. Data on income from, and marketing of, horticultural products are presented shortly.

Around 18.2 percent of all plots in the overall sample had mango trees present, followed in declining order of importance by orange trees (16.5 percent), other trees (5.8 percent), cashew trees (4.0 percent), and lime trees (3.0 percent). Tree cultivation tends to be highest in Sinchu village and lowest in Pirang village.[29] Also, the plots of founding families exhibit lower rates of tree planting for all tree categories, and particularly so for mangoes. Part of the explanation for incidence of tree plantings across villages rests with location of plots, and differences in location of plot holdings among strata. The vast majority of tree plantings occur on the site of the compound, or near the compound, where families have relatively long-term rights. Around 56.7 percent of all compound plots in the sample had one or more orange trees established on the plot, and 49.6 percent had mango trees, a trend that holds for all strata. All villages show a higher rate of tree establishment on compound plots relative to outlying fields. The economics of fruit transport and guarding against theft would improve the financial viability of plantings close to the homestead, but the long-term security of land rights associated with the family compound also increases the incentive to do so. Sinchu has the highest frequency of tree plantings on compound land of any village in the sample. While tree planting does not fully provide protection against dispossession, the establishment of productive trees gives the appearance of land utilization and increases ones odds of keeping land relative to those households leaving land vacant.

Beyond the perimeter of the compound, the rate of tree establishment drops off quickly. Sanyang continues to have a high rate of tree establishment on lands near the compound (57.9 versus 11.4 percent in Pirang for mangoes, 52.6 versus 3.2 percent for orange trees, etc.) reflecting in large part the large size of compounds and the more dispersed mode of settlement in Sanyang village compared with the other two locations. Tree plantings in outer fields are also higher, but the overall rate of tree establishment is low—in Sanyang, only 5.2 percent of outer-field plots have mango trees, 2.3 percent orange trees, 1.7 percent cashew trees, 1.2 percent lime trees, and 1.9 percent other trees.

[29] As indicated in chapter 3, most compound plots in Sinchu are a mixture of residential and agricultural uses, and compound plots constitute a higher percentage of total plot holdings (table 6.1).

B. Tree Plantings By Tenure Group

Based on the above data alone, it would appear that founding families do not preclude non-founding families from planting trees; for nearly all tree categories across plot types, households in the non-founding family strata have higher tree plantings. However, these data are distorted by three factors. It would seem reasonable to assume that space constraints and subdivisions may have constrained tree plantings in the compounds of founding families, since they were the earlier settlers and have larger family sizes,. Further, founding families have a greater number of plots, and despite their larger family size, may simply lack the labor or resources required to maintain a greater number of trees on their holdings. Finally, only one tree is required to establish the presence of trees on the holding in tables 6.4 and 6.5. It is quite possible that founding families may permit the establishment of one or several trees on the perimeter, but prohibit the establishment of larger stands. Intensity of tree plantings are examined more closely in the next section. Data on incidence of tree plantings by tenure arrangement—held and managed plots versus borrowed plots—are provided in table 6.5.

Compound plots, whether held by founding or non-founding families, tend to be considered as belonging to the respective family concerned. Few plots listed as borrowed-in constitute the household compound. Most borrowed plots are located in outlying areas, with a smaller number located near the compound. Hence comparisons of compound land owned and managed with compound land that is borrowed is technically impossible due to too few observations for the latter. Comparisons are possible on inner fields near the compound. The rates of tree plantings for all tree categories are significantly greater on "owned" plots versus borrowed plots, although results are confounded by possible endogeniety (a higher incidence of tree crops could have contributed to higher tree investment through enhanced ownership rights, or else rights were enhanced by the planting of trees.) Tree plantings on outlying fields are also higher on "owned and managed" plots compared with borrowed plots, but differences are not large. One can only assume that the higher cost of fruit transport, risk of fruit harvest being damaged or stolen, and capital constraints for tree establishment offset any gains achieved through possible enhancement of long-term rights.

Despite survey results in chapter 5 (table 5.8) showing a high number of plot managers perceiving the right to plant fruit trees on rice fields or garden plots, the data in table 6.5 show both a low level of fruit tree investment by women, and a gender bias in tree plantings between male and female plot managers. For compound plots and plots near the compound, where trees are most likely to be located, a noticeable downward bias in tree plantings on female managed plots is observed. Part of this bias can be explained by land size and land use. For example, rice lowlands are unsuitable for certain tree crops, whereas the lower profitability and shading effects of trees may make them unprofitable compared with vegetables in the context of donor schemes. Nevertheless, one cannot exclude outright the hypothesis that gender biases are at play.[30]

[30] For example, the *alkalo* preventing cultivation of tree crops on donor garden schemes to prevent women from establishing long term claims to the land through tree plantings.

Table 6.4
Orchard and Fruit Tree Investments by Village and Founding Family Status
1993 Peri-Urban Survey, The Gambia [a,b]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of major plots per category[c]	147	313	244	286	418	704
Number of major plots with orchard and fruit trees[c]	42	57	67	51	115	166
Percentage of all plots with (%):[d]						
Mango trees	25.9	13.4	19.7	9.8	23.9	18.2
Orange trees	22.5	11.2	19.7	12.9	18.9	16.5
Cashew trees	6.1	1.9	5.3	2.1	5.3	4.0
Lime trees	4.8	1.0	4.5	2.1	3.6	3.0
Other trees	7.5	4.8	6.2	5.6	6.0	5.8
Percentage of compound plots with (%):[d]						
Mango trees	60.7	38.8	45.5	31.4	56.5	49.6
Orange trees	57.1	57.1	54.6	57.1	56.5	56.7
Cashew trees	16.1	6.1	13.6	5.7	14.1	11.8
Lime trees	12.5	4.1	9.1	8.6	8.7	8.7
Other trees	19.6	14.3	9.1	20.0	14.1	15.8
Percentage of plots near compound with (%):[d]						
Mango trees	-	11.4	57.9	9.9	22.8	15.3
Orange trees	-	3.2	52.6	6.3	10.1	7.9
Cashew trees	-	1.3	26.3	3.6	3.8	3.7
Lime trees	-	-	21.1	.9	3.8	2.1
Other trees	-	3.8	10.5	3.6	5.1	4.2
Percentage of outer field plots with (%):[d]						
Mango trees	3.3	4.7	5.2	1.6	6.6	4.7
Orange trees	-	1.9	2.3	.8	2.4	1.8
Cashew trees	-	.9	1.7	-	1.9	1.2
Lime trees	-	.9	1.2	1.6	.5	.9
Other trees	-	1.9	2.3	3.1	1.0	1.8

a. A '-' means zero or negligible.
b. Orchard and non-orchard tree crops.
c. Numerous small rice and vegetable plots are counted as one major plot each.
d. Plots with at least one tree present as percentage of all plots in strata.

Table 6.5
Orchard and Fruit Tree Investment and Income by Tenure Status and Plot Location, 1993 Peri-Urban Survey, The Gambia [a]

	Plot Held and Managed by Family	Plot Rented or Borrowed-in	Male Managed Plots	Female Managed Plots
Total plots:				
Number of plots	365	242	295	327
Percent of plots with (%):				
Cashew trees	6.3	.8	7.8	0.9
Lime trees	4.4	.8	4.8	1.2
Mango trees	29.5	1.7	30.5	4.9
Orange trees	26.8	1.2	28.8	2.5
Other trees	8.8	1.7	9.2	2.1
Compound plots:				
Number of plots	120	2	116	9
Percent of plots with (%):				
Cashew trees	12.5	-	12.1	11.1
Lime trees	8.3	-	8.6	11.1
Mango trees	50.8	100.0	50.9	33.3
Orange trees	56.7	100.0	59.5	33.3
Other trees	15.8	-	17.2	-
Plots near compound:				
Number of plots	103	74	46	131
Percent of plots with (%):				
Cashew trees	6.8	-	13.0	.8
Lime trees	3.9	-	6.5	.8
Mango trees	25.2	2.7	39.1	8.4
Orange trees	14.6	-	28.3	1.5
Other trees	7.8	-	13.0	1.5
Outer-field plots:				
Number of plots	142	166	133	187
Percent of plots with (%):				
Cashew trees	1.4	1.2	2.3	0.5
Lime trees	.7	1.2	0.8	1.1
Mango trees	9.9	.6	9.8	1.1
Orange trees	2.8	1.2	2.3	1.6
Other trees	1.4	2.4	0.8	2.7

a. A '-' means zero or negligible.

VI. Plot Level Income

Information on production and sales of primary and secondary crops and on the amount of inputs applied are reported in table 6.6 for fruit trees, in table 6.7 for orchards, in tables 6.8 and 6.9 for vegetables, in table 6.10 for cereals, and in table 6.11 for rice. Information was presented in chapter 3 on the contribution of these farming activities to total household income. The data in these tables correspond to the flow of income and expenditures for only those plots containing the specific cropping enterprise to compare indicators of inputs, outputs, cost and productivity in per-hectare terms.

A. Fruit Tree (Non-Orchard) Investments

Of the plots in the sample containing one or more trees, regardless of type, plots on average contained 7.1 mango trees, 4.5 citrus trees, and 1.2 and .6 cashew and other trees, respectively. Tree establishment per plot is nearly three times higher in Sanyang than the other villages, and is nearly equal between Sinchu and Pirang, and among founding and non-founding families. These trends are also reflected in the number of trees per household growing trees (that is, summed over plots with trees in the household). Tree growing households in the overall sample cultivate 11.4 mango trees, 6.8 citrus trees, 1.7 cashew trees, and 1.0 other trees.

Gross returns per plot are highest in Sanyang where tree density is highest. Expenditures for inputs are low for all categories, with the possible exception of wage labor. Net income from plots with trees is six to eight times higher in Sanyang (D721/plot) than in neighboring villages reflecting mainly tree density per plot. However, dividing net income by total trees per household indicates that productivity in Sanyang is also higher (D21/tree versus D3/tree in Pirang and D8/tree in Sinchu). The vast majority of produce is sold to Senegalese traders (86.3 percent), and income from fruit sales is mainly controlled by the household head (87.8 percent).

B. Fruit Orchards

Of the 120 households and 704 major plots in the sample, only 12 plots had orchards established, the majority of which are located in Pirang village. These orchards on average contained 175.6 mango trees, 8.6 citrus trees, 2.6 cashew trees, and 203.9 other trees. With the exception of wage-labor and other input costs, orchards received very few commercial inputs, even compared with plots with non-orchard fruit trees. Net income per plot is substantially in excess of that for plots with fruit trees (other than orchards) (D1,509/plot versus D331/plot), due entirely to larger plot size. Once income is adjusted for number of trees per household (D16/tree for non-orchards versus D5 for orchards), net income from non-orchard tree plantings is markedly higher. As with non-orchard fruit trees, net income accrues mainly to the household head (90.9 percent), and all produce is marketed to Senegalese traders.

Table 6.6
Fruit Tree Investment and Income, 1993 Peri-Urban Survey, The Gambia [a,b]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of plots with fruit [c]	40	50	63	46	107	153
Number of trees per plot with trees:[d]						
Mango trees	6.8	3.5	10.3	7.0	7.2	7.1
Orange and lime trees	4.5	2.6	6.1	3.6	4.9	4.5
Cashew trees	.6	.4	2.4	.8	1.4	1.2
Other trees	.6	.6	.8	.7	.6	.6
Number of trees per household:						
Mango trees	7.6	5.8	19.3	12.0	11.2	11.4
Orange and lime trees	5.2	4.4	10.2	6.7	6.9	6.8
Cashew trees	.7	.4	3.6	.9	2.0	1.7
Other trees	.6	.8	1.4	1.1	.9	1.0
Household income and cost of production (D/hh):						
Sales from mango trees	49.8	66.6	99.0	46.6	84.4	73.1
Sales from citrus trees	37.3	82.2	615.4	366.9	222.0	265.3
Other fruit sales	82.3	1.7	75.6	24.1	69.2	55.7
Cost of production:						
Fertilizer	-	20.2	8.3	12.5	7.7	9.1
Pesticide	-	2.6	-	1.7	.4	.8
Tractor service cost	-	-	-	-	-	-
Seed/transplant costs	31.5	3.1	11.1	10.6	17.5	15.4
Animal cost	6.6	8.6	16.8	9.3	11.7	11.0
Wage labor costs	16.9	16.4	25.7	38.6	12.1	20.0
Other input costs	2.5	12.9	6.9	13.5	4.6	7.3
Net cash income[f]	112.1	86.7	721.1	351.5	321.6	330.5
Principal destination of sales (%):[d,e]						
Direct to consumers	-	15.8	15.4	5.9	17.7	13.7
Senegalese traders	100.0	84.2	84.6	94.1	82.4	86.3
Person controlling income from trees (%):[d]						
Household head	82.8	83.7	93.4	81.4	90.6	87.8
Plot manager (if not head)	-	12.2	3.3	14.0	2.1	5.8
Other	17.2	4.1	3.3	4.7	7.3	6.5

a. A '-' means zero or negligible.
b. Excludes orchards.
c. Numerous small rice and vegetable plots are counted as one major plot each.
d. Based on sub-sample of any plots or households with any type of tree present.
e. No sales to "hotels", "export firms", or "other traders".
f. Income before depreciation, hired labor and family labor costs per cultivated plot; all dispersed rice and vegetable plots counted as one-plot each.

Table 6.7
Investment and Income in Orchards, 1993 Peri-Urban Survey, The Gambia [a,b]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of plots with orchards[b,c]	1	7	4	5	7	12
Number of trees per plot with trees:[d]						
Mango trees	28.0	327.3	22.8	44.5	231.7	175.6
Orange and lime trees	2.0	14.8	2.5	10.0	8.0	8.6
Cashew trees	2.0	4.5	.3	5.2	1.4	2.6
Other trees	10.0	405.2	.8	8.7	287.6	203.9
Number of trees per household:						
Mango trees	28.0	342.0	22.8	69.0	231.7	182.9
Orange and lime trees	2.0	16.2	2.5	12.3	8.0	9.3
Cashew trees	2.0	4.6	.3	5.3	1.4	2.6
Other trees	10.0	410.4	.8	17.3	287.6	206.5
Household income and cost of production (D/hh):						
Sales value of mango trees	-	2,106.0	150.0	1,650.0	882.9	1,113.0
Sales value of citrus trees	-	764.0	-	200.0	460.0	382.0
Sales value of other trees	-	1,140.0	-	233.3	714.3	570.0
Cost of production:						
Fertilizer	-	12.0	-	20.0	-	6.0
Pesticide	-	-	-	-	-	-
Tractor service cost	-	-	-	-	-	-
Seed/transplant costs	40.0	-	9.0	-	10.9	7.6
Animal cost	-	-	-	-	-	-
Wage labor costs	-	770.0	-	983.3	128.6	385.0
Other input costs	-	314.0	-	523.3	-	157.0
Net cash income[f]	-40.0	2,914.0	141.0	556.7	1,917.7	1,509.4
Principal destination of sales (%):[d,e]						
Direct to consumers	-	-	-	-	-	-
Senegalese traders	100.0	100.0	100.0	100.0	100.0	100.0
Person controlling income from trees (%):[d]						
Household head	-	100.0	75.0	100.0	83.3	90.9
Plot manager (if not head)	-	-	25.0	-	16.7	9.1

a. A '-' means zero or negligible.
b. Excludes non-orchards.
c. Numerous small rice and vegetable plots per manager are counted as one major plot each.
d. Based on sub-sample of any plots or households with any type of tree present.
e. No sales to "hotels", "export firms", or "other traders".
f. Income before depreciation, hired labor and family labor costs per cultivated plot; all dispersed rice and vegetable plots counted as one-plot each.

C. Vegetables

As indicated in table 6.8, 61.7 percent of the households in the overall sample cultivated vegetables, or 85.0 percent if Sinchu village is excluded. Producing households on average have at least one person (usually female) producing vegetables. Producers on average in the sample have cultivated vegetables for 13.3 years, with the most experience in Pirang (15.0 years) and the least experience in Sinchu village (2.0 years). Since beginning to produce vegetables, most producers either have increased area (60.6 percent) or area has remained the same (34.6 percent).

Land use calculated on an area basis is made prohibitively difficult by multiple cropping, length of growing season, and different sizes of plots, all very small. The land use information in table 6.8 is based on the contribution of each type of vegetable to total value of production. Bitter tomatoes (57.2 percent) make the largest contribution to total vegetable income in the overall sample, followed by cabbage (21.3 percent), tomato (10.1 percent), and an assortment of other minor crops. While these percentages mirror Pirang village reasonably well, gardens in Sinchu village are mainly used to produce greens for autoconsumption and direct sale to consumers, while tomatoes (56.3 percent) and bulb onions (16.1 percent) are of greater importance in Sanyang village. Very few differences are apparent in the production patterns of founding versus non-founding families. The vast majority of vegetables are sold to traders (98.2 percent) using either informal (94.5 percent) or verbal (5.1 percent) contracts.

Information on costs and revenues of vegetable holdings (plots) and for households producing vegetables are presented in table 6.9. Compared with tree crops, vegetables receive relatively higher levels of fertilizer and pesticides. Around 23.5 percent of total value of production is spent on chemicals. Seed transplant costs and wage labor expenses (7.4 percent and 4.7 percent) are also significant. No mechanical or draft traction is used because of the extremely small size of holdings involved. Founding families appear to earn higher gross revenues, and make greater use of chemical inputs and wage labor than non-founding families, but net income per plot is only slightly (9.8 percent) higher. The fact that input use is higher suggests the possibility of advantaged market access, superior liquidity through off-farm employment or livestock holdings, or preferable access to credit. The more remote distance of Sanyang village is very apparent in the data. The perishability of vegetables, combined with rough road conditions between Sanyang and the main urban areas, substantially increases transport costs that are reflected in the prices that traders are willing to pay. Pirang village, despite its longer distance from the capital, is connected by a paved road. Pirang village compared with Sanyang village has higher gross revenue (D318 versus D189) and net income (D191 versus D91). The low level of Sinchu simply reflects the high degree of autoconsumption.[31]

[31] Enumerators visited each vegetable producer at multiple times during the harvesting season for vegetables inquiring about total value produced and amount sold. Both the value produced and the value consumed (difference between value produced and sold) are approximate terms gauged by the plot manager relative to vegetable sales during the reporting period. Estimates appear very realistic for Pirang and Sanyang villages. However, in Sinchu village where the vast majority of vegetables are consumed, problems in valuation did arise.

Table 6.8
Vegetable Production and Marketing, 1993 Peri-Urban Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of households growing vegetables (**A**)	2	35	34	31	40	71
Number of vegetable producers (**B**)	2	73	57	61	71	132
Number of vegetable plots (**C**)	2	91	67	84	76	160
Households growing vegetables (% of **A**)	15.0	87.5	82.5	86.1	51.2	61.7
Producers per household (persons)	1.0	1.3	1.2	1.4	1.1	1.2
Time growing vegetables (years per **B**)	2.0	15.0	11.8	16.7	10.6	13.3
Since beginning gardening, area has (% of category **B**):						
Increased	100.0	68.5	44.9	60.7	60.6	60.6
Decreased	-	8.2	-	8.9	1.4	4.7
Remained the same	-	23.3	55.1	30.4	38.0	34.6
Land Use (% of value of production):						
Bitter tomato	-	64.0	14.1	52.8	65.4	57.2
Cabbage	-	24.6	.4	24.4	15.6	21.3
Tomato	-	2.8	56.3	10.8	8.9	10.1
Eggplant	-	4.2	2.9	4.4	3.3	4.0
Mandinka onion	-	1.7	7.4	2.7	2.0	2.5
Bulb onion	-	.3	16.1	2.2	2.9	2.4
Okra	-	1.6	0.3	1.9	0.5	1.4
Hot pepper	-	.7	2.1	.8	1.0	.9
French beans	-	.1	-	-	.1	.1
Greens	18.2	-	.5	-	.2	.1
Sorrel (bisap)	81.8	-	-	-	.2	.1
Main sales destination (% of receipts):						
Traders	-	98.8	95.3	99.1	96.6	98.2
Consumers	100.0	-	4.3	.3	1.2	.7
Hotels	-	.8	-	-	1.9	.7
Unknown/missing	-	.4	.4	.6	.3	.4
Principal marketing arrangement:						
Informal	100.0	93.6	99.7	93.1	97.0	94.5
Verbal contract	-	5.9	-	6.4	2.7	5.1
Written contract	-	-	-	-	-	-
Unknown/missing	-	.5	.3	.5	.3	.4

a. A '-' means zero or negligible.

Table 6.9
Vegetable Revenue and Costs of Production, 1993 Peri-Urban Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
No. households growing vegetables (**A**)	2	35	34	31	40	71
Number of vegetable producers (**B**)	2	73	57	61	71	132
Number of vegetable plots (**C**)	2	91	67	84	76	160
Farm inputs applied on plot (% yes)						
Herd tethered	-	-	8.3	2.5	4.1	3.3
Chemical fertilizer	-	97.8	25.4	76.8	56.8	67.3
Pesticides used	-	48.4	7.9	40.2	21.6	31.4
Tractor used	-	-	-	-	-	
Animal traction used	-	-	6.6	2.5	2.9	2.7
Vegetable income and costs per plot (dalasis/category **C**):						
Value of production	4.2	318.4	188.9	321.6	223.1	278.7
Value of sales per plot	3.9	296.8	187.7	302.3	210.0	262.2
Total costs of production:						
Fertilizer	-	63.6	44.5	71.3	38.6	57.0
Pesticide	-	9.5	5.7	12.2	3.3	8.4
Tractor service cost	-	-	-	-	-	-
Animal cost	-	-	-	-	-	-
Seed/transplant costs	3.5	14.5	47.5	31.9	5.9	20.6
Wage labor costs	-	17.3	-	19.5	4.7	13.0
Other input costs	-	22.0	-	17.1	16.1	16.7
Net cash income[a]	.8	191.4	91.2	169.6	154.5	163.0
Vegetable income and costs per household (dalasis/category **A**):						
Value of production	-	2,094.2	750.9	2,362.7	999.9	1,602.7
Value of sales per plot	-	1,948.5	745.7	2,221.4	941.4	1,507.6
Total costs of production:						
Fertilizer	-	435.8	190.7	547.3	185.6	348.0
Pesticide	-	65.4	24.3	93.9	16.0	51.0
Tractor service cost	-	-	-	-	-	-
Animal cost	-	-	-	-	-	-
Seed/transplant costs	22.5	99.1	203.6	245.2	28.5	125.8
Wage labor costs	-	118.2	-	149.6	22.6	79.6
Other input costs	-	150.9	-	131.2	77.5	101.6
Net cash income[a]	-22.5	1,237.5	384.8	1,301.8	703.3	983.5
Person controlling disposition of vegetable income (% of **B** responding):						
Household head -	20.0	-	6.1	3.6	2.8	3.1
Plot owner (if not manager)	-	-	34.7	12.5	14.1	13.4
Plot manager	80.0	100.0	57.1	83.9	81.7	82.7
Other	-	-	2.0	-	1.4	.8

a. A '-' means zero or negligible.

Striking differences are apparent in income figures once income from all major plots and plot managers are aggregated within the household. On average, household members combined earned D1,603 from vegetable production, and D984 after cash expenses are met. Incomes are highest in Pirang, and for founding families, due to the greater number of plot holdings and higher plot productivity in these strata.[32] Unlike the management of fruit trees, in which the income is controlled primarily by the household head, in the case of vegetables it is the plot managers (mainly women) (82.7 percent) who control its dispensation.

D. Grains

Indicators of management practices and crop budgets for cereals (including maize, millet, and sorghum) and rice are presented in tables 6.10 and 6.11. Of the 103 cereal plots in the sample, around 15.3 percent (26.9 percent of those of founding families) were manured versus none for rice. Conversely, little fertilizer was applied to cereal crops, although 43.4 percent of rice plots received fertilizer. Rates of nutrient supplements for vegetables (table 6.9) are similar to rice; little manure is applied to vegetable plots although rates of fertilization are the highest of any cropping enterprise. The fact that both vegetables and rice are controlled mainly by women, while the manure of livestock herds is controlled by men, is not coincidental. It is possible that manure is applied to communal fields where all members benefit from higher grain consumption. Yet the analysis still raises the question of whether manure is being applied in a manner that is achieving the highest marginal value.

Vegetable production also receives the highest levels of pesticide application of any cropping enterprise in the sample, suggesting a high degree of commercial activity within households by members who do not appear to be particularly inclined to use chemicals on other cropping enterprises. The small plot sizes used for vegetable production, particularly on private plots, are not individually suited to mechanical or animal traction. However, the entire donor scheme could theoretically be tilled then subdivided into individual plots saving human power. One can only assume from the data that the transaction costs and uncertainty associated with assignments of plot areas among *kabilos* then plot managers precludes this practice. Overall, around 60.2 percent of cereal fields are tilled with animal traction versus 1.6 percent for rice and 0 percent for vegetables.

[32] Income figures would need to be converted into per-hectare terms to before assessing efficiency differences among the strata.

Table 6.10
Management Practices for Cereal Crops by Village and Founding Family Status, 1993 Peri-Urban Survey, The Gambia [a,b]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of plot observations	46	25	32	27	76	103
Herd tethered on plot (% yes)	-	33.3	21.9	26.9	11.1	15.3
Chemical fertilizer (%):						
Used on plot	-	12.0	3.1	3.7	4.0	3.9
Type used Urea	-	33.3	-	100.0	-	25.0
Compound	-	66.7	100.0	-	100.0	75.0
Pesticides (%):						
Used on plot	6.7	-	6.3	3.7	5.3	4.9
Type used Powder	60.2	-	50.0	-	67.1	57.4
Liquid	39.8	-	50.0	100.0	32.9	42.6
Tractor used (%)	-	-	-	-	-	-
Animal traction (%):						
Used on plot	50.0	84.0	53.1	51.9	63.6	60.2
Type used Owned	61.1	38.1	52.9	57.1	47.6	50.0
Borrowed	22.2	19.0	5.9	7.1	19.0	16.1
Hired	16.7	42.9	41.2	35.7	33.3	33.9
Total value of production (dalasis)	211.7	817.8	715.5	808.9	411.0	515.3
Total value of sales (dalasis)	5.4	64.0	35.0	34.1	27.0	28.8
Value of second intercrop (dalasis)	6.5	52.2	-	8.9	18.0	15.6
Costs of production (dalasis):						
Fertilizer	-	11.6	.7	4.4	2.5	3.0
Pesticide	.9	-	.6	-	.8	.6
Tractor service cost	-	-	-	-	-	
Animal cost	8.0	32.6	31.3	37.0	15.5	21.2
Seed/transplant costs	8.7	2.0	4.4	6.7	5.4	5.7
Wage labor costs	10.5	31.2	38.9	51.1	14.9	24.4
Other input costs	6.5	-	6.3	4.8	4.9	4.9
Net cash income[c]	183.6	792.7	633.4	713.7	385.0	471.2

a. A '-' means zero or negligible.
b. Maize, millet and sorghum.
c. Total value of production plus value of intercrop less costs. Represents income before depreciation, hired labor and family labor costs per cultivated plot; all dispersed rice and vegetable plots counted as one-plot each.

Table 6.11
Management Practices for Rice by Village and Founding Family Status, 1993 Peri-Urban Survey, The Gambia [a]

	Sinchu	Pirang	Sanyang	Founding Family	Non-Founding Family	Overall Sample
Number of plot observations	-	78	44	64	58	122
Herd tethered on plot (% yes)	-	-	-	-	-	-
Chemical fertilizer (%):						
Used on plot	-	62.8	9.1	46.9	39.7	43.4
Type used Urea	-	69.4	-	76.7	47.8	64.2
Compound	-	24.5	50.0	13.3	43.5	26.4
Urea+Compound	-	6.1	50.0	10.0	8.7	9.4
Pesticides (%):						
Used on plot	-		2.3	-	1.7	.8
Type used Liquid	-	-	100.0	100.0	100.0	100.0
Tractor used (%)	-	-	-	-	-	-
Animal traction (%):						
Used on plot	-	-	4.5	-	3.4	1.6
Type used Owned	-	50.0	-	-	50.0	50.0
Borrowed	-	-	-	-	-	-
Hired	-	50.0	-	-	50.0	50.0
Total value of production (dalasis)	-	234.1	380.3	330.6	238.6	286.8
Costs of production (dalasis):						
Fertilizer	-	21.1	12.5	24.8	10.5	18.0
Pesticide	-	-	2.3	-	1.7	.8
Tractor service cost						
Traction service cost	-	-	1.1	-	.9	.4
Seed/transplant costs	-	.5	3.4	3.0	-	1.6
Wage labor costs	-	8.3	35.1	32.0	2.4	18.0
Other input costs	-	-	5.9	3.1	1.0	2.1
Net cash income[b]	-	204.2	320.0	267.7	222.0	246.0

a. A '-' means zero or negligible.
b. Income before depreciation, hired labor and family labor costs per cultivated plot; all dispersed rice and vegetable plots counted as one-plot each.

Claims made by interviewees in the course of reconnaissance surveys that vegetable cultivation is highly remunerative compared with other cropping enterprises are borne out by the data in tables 6.10 and 6.11. Avoiding for the moment the difficult problem of labor costs, vegetable revenue (for households producing vegetables) is markedly higher than households growing cereals (D984/hh versus D471/hh), despite a substantially larger land base associated with the latter. The income differential is substantially higher for rice (D984/hh versus D246/hh) based on land areas for each that are roughly identical. Unfortunately, data were not collected on labor flows within the household to enable the calculation of net returns per unit of labor. Nevertheless, based on interviews with respondents and the cursory data presented here, vegetable production is highly competitive with other crop enterprises, and, as illustrated in chapter 3, vegetables are making an important contribution to total household income.

CHAPTER 7

CONCLUDING COMMENTS AND ASSESSMENT

Expansion of horticultural exports has been recommended by government and donors as a means to diversify household earnings and increase agricultural growth. This study sought to measure the importance and contribution of horticulture to the household economy, and to assess whether the land market is constraining output growth in the horticultural sub-sector. A statistical survey was implemented in four survey villages of the peri-urban area surrounding Serekunda in March to July 1993. Detailed data collected in this survey were analyzed at household, plot and plot manager levels, and compared among survey villages and according to founding family status.

I. Settlement History

Each survey village had a unique settlement history reaching in some cases back to the late 19th century. In each case, the village was founded by a single family in an area of forest or brush, followed shortly by other families who were invited or welcomed by the founder to help clear and settle the land. These founding families, as principal landholding groups, hold high positions of status in the community. Land is typically borrowed from the *alkalo* or founding families, but the *alkalo's* consent generally must be obtained for any transaction, and his/her involvement is required in any dispute. A tribute of kola nuts is typically offered in exchange for agricultural plots borrowed, largely as a symbolic gesture. Agricultural lands are normally not rented or sold to any significant extent. Borrowed land must be returned at the season's end, although some families have borrowed the same land for years. Residential property is bought and sold, and has become the norm in Sinchu, the most urbanized village. However, only improvements are transferred according to the *alkalos*, not the land itself. Because of land scarcity in Sinchu, the *alkalos* there are reclaiming land from households to make land available for maturing children and newcomers.

A steady stream of migrants has increased demand for land, particularly in areas closest to the city (that is, Sinchu). In-migration has tended to lower education, English language skills, household age, and household size relative to households in the more peri-rural settlements of Pirang and Sanyang, and relative to the founding families, suggesting a process of ruralization taking place at the urban fringe. Moreover, households in areas of rapid settlement are experiencing considerable tenure insecurity stemming from landholding groups reclaiming land for gift or sale to newcomers. Meanwhile, households in the peri-rural areas (Pirang and Sanyang) are finding their population distributions becoming more bi-polar as young male adults especially, but also young female adults, leave the villages to reside and work in the city.

II. Employment

Since the droughts of the 1970s and the decline of the groundnut industry, families have placed more emphasis on vegetable cultivation. Women are primarily responsible for growing and marketing the vegetables. Stranger farming has steeply declined due to lack of rain, the decline of the groundnut industry, low farm incomes, and the spread of animal traction, although new labor

arrangements are taking their place. Casual workers, mainly from up-river and the Casamance are seeking employment for building fences, digging wells, gardening, and work on commercial farms.

The impact of medium- and large-scale commercial farms on employment is an important policy concern. Horticultural crops, being relatively labor intensive, combined with the perceived scale efficiencies of larger firms in the marketing of vegetables and access to credit, would theoretically support expansion of such firms in vegetable production and marketing. Commercial farms are located in the proximity of all three survey villages. However, of the 161 different wage- and self-employment jobs reported in the overall sample, only 11 were carried out in association with activities on such farms. No doubt, the limited number of commercial farms operating in the peri-urban area is acting to constrain employment capacity. Nevertheless, promises by commercial farms to employ village workers in exchange for land from the *alkalos* rarely have been fulfilled.

Agricultural production is carried out with family labor, although wage and *kafo* labor are important for some tasks. All household members work on the communal grain fields, while women supply the majority of labor for rice and vegetable cultivation on their own plots. As a result of high out-migration, the supply of able bodied workers has declined in Pirang and Sanyang villages. Plot managers reported labor scarcity for all crops and tasks, even founding family households, which have some leverage in hiring *kafo* labor.

III. Land Rights

The land market is heavily linked to administrative allocations by the *alkalo* and founding families, but lending and borrowing land have evolved rapidly throughout the peri-urban areas in recent years, as have commercial purchases and sales on the urban fringe. Evictions, a major cause of land dispossessions in Sinchu village, are acting to undermine land tenure security.

Information about land rights was solicited at two levels: the household head's perception of his or her land rights for all plots in the sample, and the rights perceived by plot managers to their own holdings. The perceived rights of the household head are highest on upland plots followed by rights on private plots, rice plots, and finally donor plots. Planting annual crops is the most common right reported, followed by planting fruit trees, bequeathing plot to heirs, building a wall, renting the plot, and selling the plot. While rights to rent or sell land are constrained, a high percentage of household heads feel confident in their ability to bequeath land to heirs (except in Sinchu). Founding families appear to hold greater land rights, particularly transfer rights, than their non-founding family counterparts. However, the ability to make improvements and transfer land is heavily compromised by the need for authorizations both within the household, and from landholding groups. Requirements for authorization are highest in Sinchu village and lowest in Sanyang village. The household heads of founding families require virtually no authorization on upland fields that fall under the control of the household head. However, their rights decline over the management of private plots and rice plots.

Substantial individual rights are perceived by plot managers to use the land and make plot improvements, particularly so in Pirang and Sanyang villages. Private plot managers in founding families clearly perceive more rights than those in non-founding families. Given the allocations of

land from the *alkalo* and compound/household head to managers, a remarkably high percentage of plot managers perceived the right to rent-out or sell their land. Also striking is the finding that few plot managers indicating rights possession feel compelled to seek authorization to exercise those rights relative to household heads. The greatest rights to plant trees, build fences, and improve water retention structures are associated with rice, vegetable gardens, and orchards. Most managers of rice (and to a lesser extent vegetable) plots (that is, women) perceived the right to bequeath land to heirs. Overall, these data suggest that private managers have considerable freedom and tenure security in the management of their private landholdings; to the extent that any rights are compromised by authorizations, it appears to be those of the household head.

Important philosophical questions are raised by the research. Should founding families as the lessors of land to borrowing families on concessionary terms confer upon themselves the right of repossession? Conversely, for borrowing families who have not paid rents, to what property rights should they be entitled? The current system places borrowers in a precarious situation. A significant number of borrowing families in Sinchu, who based on allocations may have felt that land access was assured, one day found a portion of their land repossessed by the *alkalo* to make way for others. These same processes are at work in Pirang and Sanyang, but problems are not yet widespread due to their relative abundance of land. Unfortunately, borrowing families who have been successful in acquiring land through customary mechanisms operate in trust that traditions will prevail. As land scarcity tightens, the reserve of village land upon which they rely for future inheritances experiences a decline with sales to newcomers. Borrowers may be asked to give back a portion of their land, pay a higher price through purchase or rental, or relocate elsewhere to sustain a living. It is in periods of uncertainty, where the beginnings of a commercial market begins to permanently alienate land from the founding families through purchase, that current tenants experience the greatest insecurity.

IV. Tree Plantings

Around 18.2 percent of all plots in the overall sample had mango trees present, followed by fewer frequencies of orange, cashew, lime, and other trees. The vast majority of tree plantings occur on the site of the compound, or near the compound, where families have relatively long-term rights. Households in the non-founding family strata have higher tree plantings for nearly all tree categories across plot types. It would seem reasonable to assume that space constraints and subdivisions may have constrained tree plantings in the compounds of founding families, since they were the earlier settlers and have larger family sizes. Further, founding families have a greater number of plots and, despite their larger family size, may simply lack the labor or resources required to maintain a greater number of trees on their holdings. Also, only one tree was required to establish the presence of trees in the survey. Once, data are adjusted to show average tree holdings per household, tree holdings are found to be nearly equal among founding and non-founding family groups. This suggests either that founding families are permitting the establishment of only a few trees on the perimeter of borrowed plots, or that founding families are planting greater concentration of trees relative to borrowing households.

Compound plots, whether held by founding or non-founding families tend to be considered as belonging to the respective family concerned. Unfortunately, comparisons of compound land

owned and managed with compound land that is borrowed is technically impossible due to too few observations for the latter. Comparisons were possible on inner fields near the compound. Borrowing families, having only limited rights of a seasonal duration, lack incentives to invest in long-term land improvements. The rate of tree plantings for all tree categories are significantly greater on "owned" plots versus borrowed plots, providing weak evidence that lack of ownership rights by tenants is constraining fruit tree investment. Tree plantings on outlying fields are also higher on "owned and managed" plots compared with borrowed plots, but differences are not large. The economics of fruit transport and guarding against theft would improve the viability of plantings near to the compound, but the long-term security of land rights associated with "owned" versus borrowed holdings also appears to be increasing planting incentives.

Despite survey results showing a high number of plot managers perceiving the right to plant fruit trees on rice fields or garden plots, the data show both a low level of fruit tree investment by women, and a gender bias in tree plantings between male and female plot managers. For compound plots and plots near the compound, where trees are most likely to be located, a noticeable downward bias in tree plantings on female managed plots is observed. Part of this bias can be explained by land size and land use. For example, rice lowlands are unsuitable for certain tree crops, whereas the lower profitability and shading effects of trees may make them unprofitable compared with vegetables in the context of donor schemes. Nevertheless, one cannot eliminate outright the hypothesis that gender biases are at play.

V. Vegetable Cultivation

The average annual income of households in the overall sample is D11,900 or about US$1,434. The majority of income is derived from self- (45.0 percent) and wage-employment (39.2 percent) activities. Despite the rural character of life in Pirang and Sanyang villages, net income from farming represents only 15 to 16 percent of total household income there. Sinchu understandably has the lowest agricultural income. Surprisingly, the most remote village (Sanyang) has the highest level of wage-employment. Many people have established residences in Sanyang in recent years and now commute to and from the urban center. The annual incomes of founding families are 49.9 percent higher than those of non-founding families due to higher wage income, higher levels of remittances, and higher earnings from upland crops, rice, and vegetables.

Horticultural crops are making an important contribution to household income in Pirang village and potentially represent an important source of income growth in the other villages. Of the total household income in the overall sample, 2.7 percent is derived from sales of fruit tree products (non-orchards), 1.4 percent from orchards, and 3.2 percent from vegetable production. However, if one examines the same indicators in Pirang village, fruits (orchard and non-orchard) constitute 4.0 percent and vegetables 6.7 percent of household income. The higher income of Pirang village is derived from higher vegetable income and self-employment (including vegetable marketing) without major income cuts in other competing activities (for example, upland crops or rice). As vegetables tend to be produced in the dry season, gardening and trading thus appear to be decreasing both unemployment and underemployment in the village, in the process absorbing the labor surplus and increasing incomes.

This analysis raises the question of why more family resources are not moving into vegetable production.

First, labor is a constraint, but it is surprising that labor shortages are being reported at the same time that a relatively strict segmentation of labor within the household is observed, particularly the low rates of labor by men in vegetable cultivation. These labor constraints are not simply caused by lack of labor, as the opportunity cost of labor in the dry season is low. Further it is not a matter of profitability, as vegetables are widely perceived to be highly remunerative. This issue is perplexing and deserving of further investigation.

Second, lack of capital to make large fixed-place investments is reported to be constraining in all survey villages. Yet, households are demonstrating an ability to make expensive investments elsewhere, particularly in fencing. Further, the lack of private capital seems overstated; wage earnings from non-farm employment are by no means insignificant, and theoretically the purchase of pumps and investment in cement wells could be made through a pooling of funds within the village.

Third, it may be that irrigated vegetable cultivation is profitable only as long as donors are willing to subsidize the infrastructure; without their investment in cement wells and pumps, irrigated vegetable production is not profitable. The above assertion of capital constraints seems more plausible in this regard.

Fourth, despite vegetable prices providing remunerative profits, uncertainty over marketing outlets and doubts about long-term prices are leading villagers to discount future returns, and thus their willingness to make longer term improvements.

Fifth, founding families are reluctant to allocate vegetable land for village use out of fear that it may be permanently claimed by borrowers. Plot managers on donor schemes are primarily members of the founding families who contributed land to the schemes. It is entirely possible that landholding groups are unwilling to commit more land when the benefits are primarily obtained by members outside their principal landholding groups.

None of these explanations alone provides an entirely satisfactory answer. Based on the results of this study, the evidence points to all of the above as potentially important explanations, if not binding constraints, to the expansion of irrigated vegetable production. Despite the important benefits of an equitable land distribution within the present customary tenure system, there are nonetheless concerns that *alkalos* are reaping excessive benefits from land sales, that longer-term borrowers are not receiving adequate compensation, and that the limited land rights of borrowers is constraining land improving investment. The expansion of long-term leaseholds to clarify rights and increase tenure security is not an adequate solution given the present resource constraints confronting the registry. Yet, neither does the customary tenure system seem to be sufficiently adapting, or adapting quickly enough, to the conditions of land settlement, land scarcity and market forces at work in the peri-urban area. Land policy in The Gambia thus seems stuck in the netherworld between government over-emphasis on leasehold registration and the myth that customary systems will evolve in response to commercial investment needs.

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ANNEX A

CASE STUDIES INTERVIEWS WITH *ALKALOS* IN THE SURVEY VILLAGES

Figure A.1
Settlement, Employment, and Land Markets, Sinchu Baliya Village

Sinchu Baliya is located on the outskirts of Welingara village, south of Serekunda. The village was founded by the father of present *alkalo*, Amadou Bah, some 60 years ago. The father, an important businessman who owned a shop in Bakau, decided to seek land for farming out of fear that business would not last. With farm land in Bakau in short supply, he contacted the *seyfou* (chief) in Sukuta, who "gave" him the land where Sinchu Baliya is presently located.

Other families interested in farming were invited (by the father) to settle the land. Some were kin, others were strangers from far and wide. At the time of settlement, the area was covered by thick bush, replete with snakes and hyenas. He cleared the land with the help of *kafo* labor groups. Families were then encouraged to settle as neighbors and to help protect the concession from wildlife and unauthorized claims.

Before the droughts of the 1970s, stranger farmers coming to the area seeking seasonal use of land in exchange for labor was a common occurrence. Settlement by migrants was less common. Stranger farming has since steeply declined due to lack of rain, the decline of the groundnut industry, low farm incomes, and the spread of animal traction.[a] Since the 1970s, many of the people settling in the village have come from elsewhere in The Gambia (principally rural areas affected by low incomes and drought) and from abroad, including, *inter alia*, Guinea Bissau and Senegal.

Once primarily a farming community, the village now has more residents relying on wage and skilled labor for their livelihood. Nevertheless, while a small number of households depend entirely on non-farm employment, the vast majority have small farms. Nearby Sinchu farm and Radville farm, both large commercial operations, provide sources of employment. Wages, however, are disappointingly small. Tilling one's own land provides superior income, particularly from vegetables. Giving land to commercial operations would nonetheless be preferred if they were viable and provided employment for the community. All too often, however, land is allocated by the *alkalo* to a commercial operation on promises of employment that never pan out.

A nearby commercial farm is a case in point. The *alkalo* claimed to have given land on condition that people from the village would be provided employment. The farm never followed through with its promises. Senior positions initially given to villagers were later given to expatriates, and the villagers were fired. The *alkalo* has since protested, with some positive results, yet he remains irritated at the reluctance of farm managers to rehire workers from the village. He is reluctant to take the land back in hope that the commercial farm might yet succeed and increase employment in his village, but severe land scarcity is making the temptation difficult to resist.

Demand for land has grown sharply in recent years. The rapid population growth of Serekunda city has reached its outer limits due to the extensive areas of surrounding swamps. High rents there have resulted in many people coming to Sinchu Baliya seeking land upon which to live and farm. Some settle permanently. Others borrow land to farm while residing in Serekunda. Any affairs regarding land require that the *alkalo* be notified and kept informed. Transactions require that he act as a witness.

Arable land for dry land farming and swamp land for rice are rarely sold, leased, or rented, although the customary tribute of "kola nuts" to the *alkalo* in exchange for a seasonal concession remains a common practice.[b] Land for residences is bought and sold, and sales of residential property are widespread. Serious land scarcity has emerged in recent years. What criteria does the *alkalo* use in allocating land? Arable land for farming is allocated on a first come, first served basis; because of the many people requesting land, the *alkalo* must turn some away, usually those coming late in the agricultural season. Land for residential purposes is sold to those able to pay in cash or in kind (for example, a bag of groundnuts). Money from the sale of residential plots is retained by the *alkalo's* family, and "rightly so," because the land belonged to his father. Individuals are entitled to sell the buildings on land to another, but only with the approval of the *alkalo* because the land belongs to him.

A recent meeting of the *alkalos* with the *seyfou* addressed the problem of land scarcity in the region. The *seyfou* formally set aside an area adjacent to Sinchu Alhaji for agriculture. Whomever is interested in farming can contact the concerned *alkalo* (s) for an allocation.

The *alkalo* is now being forced to reclaim some of the land formerly given to families by him or his father. Land is needed for the younger generation and newcomers. An attempt is made to seize land that is not fully utilized, but this is not always possible. These repossessions sometimes pose hardships for the families losing land, but the needs of others are greater.

Disputes, particularly boundary disputes, are widespread and demand the constant attention of the *alkalo*. People frequently encroach upon another's land to expand their holdings. Ownership disputes are becoming more common. The following example is common: a father borrows (has been given) a plot for a long time, the *alkalo* reallocates a portion of the land to another, and the sons, upon reaching age, demand the land back to establish their own households. Such problems are increasing and are becoming more difficult to resolve as the size of the village increases.

a. While labor arrangements concerning stranger farming can be expected to vary depending on demand for seasonal labor, the supply of stranger farmers seeking land, and land availability, 5 days of labor on the landholder's farm in exchange for 2 free days to work on a "private" plot was a prevailing contract. Animal traction, a labor saving technology, helped to reduce stranger farming by reducing farm labor demands per-unit of area.

b. In response to the question, "has the 'kola-nut' tribute increased in size with time" (to help assess whether the land price has increased with higher demand for land), the *alkalo* responded negatively, then clarified that some farmers presented no tribute at all, yet were still allocated land.

Source: Personal conversation with *alkalo* Amadu Bah, Sinchu Baliya.

Figure A.2
Settlement, Employment, and Land Markets, Sinchu Alhaji Village

Sinchu Alhaji village, formerly Madena Sekunda, was founded in 1968 by Alhaji Abdoulie Ceesay from Kiang, who at the time was living with his Koranic students in Serekunda. As a marabout in his younger years, he one night in a dream received orders from God that he should establish a village for himself and his Islamic students. He visited the *seyfou* in Sukuta for land, and there saw in a dream a tree under which the village should be established. However, only some time later, after visiting the "wise" *alkalo* of Old Yundum and inquiring about the tree, was he able to locate the site of the present village. That tree still stands at the center of Sinchu Alhaji today.

At the time of settlement 28 years ago, the area was covered by heavy bush. The *alkalo* promised the *seyfou* that he and his followers would supply the labor for clearing and establishing the village in order to promote Islam in the area. The first compound was settled by a family from Saback Sanjal in the North Bank Division in 1968. Others began arriving in 1973 and 1974. The village was sought out by those who wanted to practice Islam, move nearer to the city, and raise a family in a rural environment free from the vices of urban life. Serekunda, the home of the marabout's students before the move, was rife with adulterating influences—cigarettes, modern dress, and immoral behavior.

A second wave of settlement followed beginning around 1977/78. Families who arrived from inland areas indicated they had no water due to drought. "Kola nuts" were offered to the *alkalo*, and the families were accepted into the community. By 1984, the current village comprised approximately 35 to 45 compounds. Nearly all settlers to this point practiced traditional lifestyles and acquired land primarily for farming.

A third wave of settlement followed in 1985, with urbanites from Bakau, Serekunda, and Banjul seeking land for residences and farming. Currently, as many as 50 people per day are showing up on weekends at the *alkalo's* compound to seek land allocations. The size of the village has grown to approximately 170 compounds at present. The demand for land by wealthier households is high, but a substantial number of poorer households are seeking land as well. People in some cases have no place to stay, or rents in Banjul or Serekunda are too high. The story of a recent migrant provides a case in point. A gentleman with "kola nuts" arrived at the *alkalo's* compound one day. He had 6 children to feed, lacked employment, and was staying in his brother's crowded compound.

Plots are now being allocated in sizes of about 25x30 meters. Allocations used to be larger, 36x36m to some as large as 50x50m. However with the tightening supply of land in the village, the *alkalo* has had to reclaim land from certain families who received larger allocations in the past. The sub-divisions are carried out by the survey department. Do people with larger holdings complain about losing it? The response: "One does not disagree with the *alkalo*."

The land is given for "free," but some form of "gift" to the *alkalo* is considered proper. The wealthier should give more, while the poor may be able to afford only a small tribute of "kola nuts" or D20 to D100. However, the land is never sold, only the improvements thereon.[a] Once land is allocated, the

individual has a right, and is encouraged by the *alkalo*, to seek a 99-year leasehold to protect investments in the land—that is, mango trees, house, and other permanent structures. Only 15 percent of families now hold leaseholds, although the *alkalo* keeps well-designed sketch maps of individual compounds and the village (a few were passed around with pride for researchers to review). Certain areas are reserved for residential use and other areas for agriculture.

Why encourage registering the land if the *alkalo* is looking out for the best interests of the people? First, a lease is required for tenure security. There is no guarantee that the next *alkalo* will honor the promises made by current or past *alkalos*. Second, a lease is good collateral for getting credit from banks. Upon default, the bank can reclaim its capital by selling the property to another, but only the improvements are sold as the land belongs to the *alkalo*.[b]

The people now requesting plots want land for shops, stores, and houses. Priority is given to those prepared to live in the area, those willing to develop and invest in the land, and those in need.[c]

One large commercial farm has been established in the area. The land (400x450m) has been allocated but not yet developed. The owner promised to employ 100 people; while none have yet been employed, the *alkalo* is still hopeful. Why do small farmers not pool their capital for large investments? Earnings of D20 here and D50 there make it difficult to accumulate capital. The *alkalo* is able to allocate land, but residents lack the funds to develop the land themselves. No vegetable schemes are present in the immediate vicinity. The majority of people farm, but incomes are low. Large commercial operations are thus preferred; they have a decided advantage in mobilizing capital, and providing cash income and employment.

a. The *alkalo* emphasized that the Koran strictly forbids the sale of land.

b. The *alkalo* was presented with the following scenario: suppose the bank makes a loan of D10,000 to an individual who absconds with the money. As no investment is made in the land, there are no improvements to sell, and the land cannot be sold as it belongs to the *alkalo*. Whether the bank would agree that the *alkalo* owns the land is another matter, particularly for registered property. The central question raised concerns the suitability of the land as collateral when the *alkalo* maintains the right of landownership. According to the *alkalo*, the bank losing money is an unfortunate situation, but is nonetheless inevitable as the land cannot be taken away from the *alkalo*.

c. Some farm land has been allocated the village in Yundum and Sukuta by the *seyfou* of the district in consultation with the *alkalos*.

Source: Personal conversation with the son of Alhaji Abdoulie Ceesay, Sinchu Alhaji.

Figure A.3
Settlement, Employment, and Land Markets, Pirang Village

"Our forefathers did not record the history of what is presently Pirang village, so the history of its settlement is hazy; some knowledge has been lost. The following history of Pirang is as I learned it from my father, and he from my great grandfather, Biram Kunda, founder of the village."

The founding of Pirang occurred sometime prior to the advent of the Europeans in The Gambia. Two brothers were in line for ascendancy to chiefhood. In the symbolic gesture of slipping a bangle onto his wrist, the *alkalo* explained how the "palm bracelet" was slipped onto the wrist of Biram Kunda's brother, indicating his selection as chief. Biram Kunda, angered by the decision, moved away to establish what is now Pirang village.

The area at the time of Biram Kunda's arrival was covered by thick bush, with abundant wildlife—leopards, hyenas, and snakes. After clearing the land on his own, he was instructed by marabouts to plant four trees, one at each corner of the village. The trees, according to the marabouts, if allowed to grow until their flowers were seen, would protect the village against aggression and evil spirits. These trees are still visible in Pirang today, and since its founding, the village has never fallen to outsiders.[a]

Once the trees were planted, other families, mainly warriors from the east, began to arrive asking Biram Kunda for the right to settle. As he wanted neighbors, any family who cared to stay in the area and help clear the land was welcomed and was given land from surrounding areas. As a boy (about 50-60 years ago), the *alkalo* recalls 9 families residing in the village—Bojang Kunda (4 families), Turray Kunda, Darboe Kunda, Daffeh Kunda, Jabang Kunda, and Fofona Kunda. These families were the first arrivals in the village and are still recognized as the "founding families" to this day.

Growth of the village since the *alkalo's* youth has been gradual. Little by little children grew up and established their own households, while others have continued to migrate to the village from other areas. Three to five families each have sprung from the original 9 families, so that roughly 45 households of the current 178 in Pirang today are related in some way to the founding families.

Until recently, newcomers wanting land need only have contacted the *alkalo* or one of the founding families. No cash payment was required aside from the customary tribute of "kola nuts" to the *alkalo* or founding family from whom the land was borrowed. However, land scarcity has increased, and beginning 3 years ago the *alkalo* began charging D300 for residential plots. Agricultural plots are never rented or sold, but instead are "borrowed-out," and must be returned at the end of the season, although some families have borrowed the same plots for years.[b] Land disputes are rare. Any land transfer requires that the *alkalo* be notified, and any dispute must be resolved by him, if the parties involved cannot reach a solution themselves.

Land sales, while emerging, are still infrequent. The law requires that the *alkalo* be notified of any sale. The founding families can sell without the *alkalo's* permission, although all keep him informed. However, if the borrowers of land from the founding families attempted to sell land, even if borrowed a very long time, a very serious conflict would be created.

People from Banjul or Serekunda seeking land has **not** been a common occurrence. Yet, a brother of an existing family in Pirang moving to the village is commonplace. As the village continues to expand, its outer periphery is beginning to come into contact with the land of other villages. When overlap is eminent from an allocation, the *alkalo* is presently willing to offer the neighboring village D300 for the land. One offer has to date been accepted.

Times are changing. Land used to be reserved and demarcated for children, who in turn used to hustle for money. The present generation, however, belittles time spent in agriculture and farming. A large number of families in the village depend entirely on non-farm employment. Women, while always traders, have begun to spend more time on gardening. Stranger farmers are disappearing. New labor arrangements are taking their place. Visiting workers mainly from up-river are now seeking employment for fencing, gardening, and work on commercial farms.

Most of the rice fields are now damaged by salt intrusion. The vegetable scheme donated to the village by the EEC is too small, and the vegetables are under constant threat of damage by animals. In the past, farmers always felt certain that farming would remain profitable. Uncertainty now prevails.

Presently, the people remaining in dryland farming work hard, but for little remuneration. Those women engaged in vegetable cultivation can earn more money in one season than others earn year round. Why not pool capital to make the necessary investments in wells and fencing? Small farmers are poor and find it difficult to accumulate the capital needed for such investments.

A number of large commercial farms are widely dispersed throughout the area. As many as 50 workers per day, including men and women, may be hired year round from the village. Trucks arrive daily to pick up anyone willing to work. Wages are terribly low, only D12/day for work from 7 am to 4 pm. The commercial farms were given land by *alkalos* from other villages. No commercial farmer has yet asked the *alkalo* for land, but he would be receptive. He has land available and would be willing to ask others in the village to rent or sell land if a commercial farming operation could be enticed to come.

Given that commercial farm wages are low and arable land is growing scarce, why not allocate more land for individual holdings (followed by a long pause)? It is difficult to know what to say! Wages are indeed low, but employment is needed for people in the village. Labor in the village is abundant; capital is the problem. The EEC scheme has been very beneficial but it is too limited in size. Employment could be increased by expanding operations there. Large commercial farms are preferred in the sense that they provide better access to capital and have greater capacity for wage employment.

a. The village has now outgrown the original boundaries.
b. “Borrowed-out” means “loaned-out” without any fee being paid.

Source: Personal conversation with *alkalo* Maa Bojang, Pirang.

Figure A.4:
Settlement, Employment, and Land Markets, Sanyang Village

Sanyang, a very old village, was founded more than 75 years ago by the family of the present *alkalo's* grandfather on what was then mostly forest land. Other "founding" families—Kore Kunda, Jabak Kunda, More Kunda, and Namba Kunda, later settled in adjacent areas, claiming the large area of land surrounding what is presently Sanyang village. The village is about 5 km from the coast, the mangrove swamps marking its western boundary, and only 20 km from the outskirts of Serekunda, although the trip still takes more than 30 minutes by laterite road.

Sanyang's population continues to grow as a result of families coming home, migrants from the Casamance, and, in recent years, people from Serekunda seeking land. Unlike Sinchu Alhaji, Sinchu Baliya, and Pirang villages, land is still not sold in Sanyang. Land is allocated by the *alkalo* in much the same way as his father before him. Land for newcomers is still abundant and granted upon request. Agricultural plots are never rented or sold but are instead "borrowed-out," sometimes for a very long time. In addition to grants by the *alkalo*, allocations are also made by the "founding" families who still maintain a sizable presence in the village. These allocations, although made by the families, must be approved by the *alkalo*. Unlike his counterparts in Sinchu Alhaji and Sinchu Baliya, the *alkalo* has not yet been forced to sub-divide or reclaim any previous grants of land.

The influences of urbanization have nonetheless begun to effect changes on life in the village. In recent years, people from Serekunda and other urban areas have been coming to Sanyang asking for land, mainly to establish residences. As Sanyang has abundant farm land still available, the *alkalo* laments that there are fewer potential settlers than he would like to see. Yet, the ones to whom he has "given" land, by and large, have not developed it. They are not interested in agriculture, and farming does not provide the profitable employment that it once did.

The development of a piece of land, either with a fence or a compound, is sufficient to provide a family with secure property rights. However, if an allocated parcel is not developed within 2-3 years, the *alkalo* can and will assert his right to reallocate it. Land without physical development, according to the *alkalo,* is strictly "borrowed." Statutory tenure, administered through leaseholds by the state, has to date had minimal impact on land tenure in the village. Three plots of land in Sanyang have been registered as leaseholds, and one transfer of land title has been recorded at the Brikama Area Council.

Disputes are a very sensitive issue and have risen for the first time in recent years. While the *alkalo* is able to settle most land conflicts himself, he has in a few rare cases had to consult the *seyfou*.

The last two years have been extremely bad for groundnut farmers in Sanyang. Many farmers harvested nothing in 1992. Cultivation of cassava and early millet (*suno*) has been on the rise, reflecting (according to the *alkalo*) the decreasing level of rainfall in recent years. Vegetable production has been steadily increasing, and women do most of the work. Most of the vegetable produce is sold in the local and Brikama markets, although some women sell their produce to larger vegetable traders such as Radville farms.

Fruit trees are mainly planted on compound land. Only after the house and compound are built can the trees be planted, and both belong to the family concerned. Vegetable gardens (any land "developed" is considered a garden) are treated differently than other crop fields. The individual or group that makes the investment in the wells or other infrastructure is entitled to freely develop the land in any way s/he or they want. However, garden land is scarce due to the limited endowment of natural lowlands, and, other than the vegetable scheme constructed by the EEC at the village perimeter, private capital is too scarce to undertake the necessary investment in wells.

Land for the EEC vegetable scheme was provided by the founding families. Formerly communal land, the EEC project was given land in trust to be developed for the benefit of the village. Traders or large commercial farms used to buy vegetables from the scheme for sale to urban hotels and restaurants. While their number has since dwindled, there is still more income to be made on vegetables in the dry season than groundnuts in the wet season. No large commercial farms currently hire labor from the village.

Stranger or itinerant farmers no longer come to Sanyang in significant numbers. They were never numerous, but the few that did come have since ceased. Seasonal or casual laborers have followed in their wake. Arriving mostly from up-river and the Casamance, they hire out their labor for fencing gardens and digging wells on a piecework basis during the rainy season, and for weeding on a wage basis (D20/day). Both *kafo* labor and casual labor are very old and important institutions in the area.

Source: Personal conversations with *alkalo* Malang Famata Bojang, Sanyang.