

**The Importance of Correctly Characterizing the Compound's Tenure Distribution  
in Formulating National Land Tenure Policy: The Case of Senegal**

**Elise Hardy Golan**

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**Department of Agricultural and Resource Economics**

**University of California, Berkeley**

**Elise Hardy Golan  
207 Giannini Hall  
Dept. of Agricultural and Resource Economics  
University of California  
Berkeley, CA 94720**

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The African compound is a complex production and consumption organization, it incorporates farming and tenurial systems. Failure to correctly characterize these systems has resulted in tenure theory and policy that is incomplete and incorrect. The purpose of this paper is to illustrate the importance of correctly describing the African farming unit and the allocation of tenurial rights, and to propose a method by which a correct description can be achieved. A land tenure study was conducted in the region of Senegal's Peanut Basin from August 1986 to July 1987. Data from this study will supply an empirical example of the importance of correctly characterizing the compound. It will be shown that both a registered tenure regime and Senegal's Law of National Domain fail to address the complexity of the compound and that this results in inefficiencies in land use and allocation.

### *DESCRIBING THE COMPOUND*

Western scholars have encountered two fundamental problems when working with African land tenure. First, faulty or incomplete characterization of the African farming unit has led economists astray in many land tenure studies. Economists and other development planners must be careful to go beyond the compound head (who happens to be the easiest to interview), and define the role of each member of the compound. The majority of economic or development studies exhibit a particular stubbornness in continually reducing the African farming unit to "the farmer." When this step is taken in ignorance, references to "the farmer" allude to a "farmer a l'americaine." When the simplification occurs only after much apology to the compound/household literature, "the farmer" refers to an amorphous entity: the compound takes on the quality of a black box in that it reacts through an unspecified mechanism to economic or environmental or social stimuli. In almost all cases, "the farmer" ends up meaning the compound head, and he is defacto accorded owner-operator status. This is a costly simplification. In the African setting, compound heads, wives, children, cousins, uncles, nephews, etc., could all be responsible for cultivating compound land. Each one of them is "the farmer." Each one of them is subject to a different set of constraints and a different set of motivations. In persisting to model rural Africa using just the constraints and motivations acting on the compound head and excluding those of the other farmers in the compound, economists cannot hope to develop successful agricultural programs.

The second problem that Western scholars encounter arises when trying to classify African tenure systems. Economists must overcome their propensity to apply labels such as individual, communal, indigenous or tradi-

tional to various tenure systems and to then undertake sweeping comparisons of those systems. For example, rarely in the world does there exist pure freehold tenure in which the ownership of a parcel of land entails, as in the original English definition of land, not just the land surface, but also "everything which is fixed to it, and also the air that lies above it right up to the sky, and whatever lies below it right down to the center of the earth." Even in the U.S., that bastion of individual rights, individual ownership of land is conditioned by the laws of eminent domain or pollution regulations, and quite often, water or mineral rights are separate from land usage rights as are the rights to sell, rent, or build. The complexity of any tenure system can rarely be described in a single word or a phrase. Property, including land tenure, is constituted by a set of rights. An individual's claim of property in land is his/her claim to a set of rights over a given piece of land. There are many rights associated with land ownership, and these rights must be detailed individually to accurately describe a system of tenure and to provide a basis of comparison with other systems. In the words of R. Simpson:

The collection of rights pertaining to any one land parcel may be likened to a bundle of sticks. From time to time the sticks may vary in number (representing the number of rights), in thickness (representing the size or "quantum" of each right), and in length (representing the duration of each right). Sometimes the whole bundle may be held by one person or it may be held by a group of persons such as a company or a family or clan or tribe, but very often separate sticks are held by different people. Sticks out of the bundle can be acquired in many different ways and held for different periods, but, the ownership of the land is not itself one of the sticks; it must be regarded as a vessel or container for the bundle, the owner being the person (individual or corporate) who has the "right of disposal" as it can be called. [1]

The sticks in the bundle can be determined in any number of ways. They could be determined according to ecological use, which might specify seasonal rights to fish, hunt, gather, or graze over a virtually unbounded area of land, or they could be determined according to market or production specifications, which might delineate rights over trees and plants, minerals, water, alienability, mortgage, etc.

When working in African land tenure, economists and development planners would be better served by dropping the labels and breaking the tenure systems into their most basic elements. By dissecting tenure systems into the rights they entail, much confusion and unnecessary debate could be avoided when weighing the merits (or possible merits) of various tenure systems. A list of the sticks that might appear in the African tenurial bundle is given below. This list was composed with production and allocation questions in mind.

#### a. Right of Access to Land

The owner of this right has the right of access to group (either compound or village or tribal) land. The parcel of land is not specified and could be changed from season to season by the group authority.

**b. Right of Access to a Particular Parcel**

These rights are use rights to a specified piece of land. These rights are relatively secure meaning that they are not likely to be shifted on a seasonal basis.

**c. Root rights**

With root rights, the planter of a tree, bush, tuber, peanut plant, etc., has rights over the fruits of the plant as long as the roots remain alive. This is particularly important in the case of trees or bushes that are useful over a long period of time.

**d. Right to decide on Crop**

Whether or not a farmer has the right to grow crops on a piece of land, the right to decide on what crops to grow could be vested in another party such as the group authority or even the government cooperative or marketing board.

**e. Water rights**

This specifies whether or not a farmer has the right to irrigation water, be it on or off his/her parcel of land.

**f. Right to Determine Heirs**

This right specifies whether or not a landowner has the right to specify who will inherit his/her land.

**g. Right to sell**

R. Simpson contends that this is the right that defines land ownership. This is also the right that characterizes many African tenure systems in that it does not exist. But, African farmers, compounds, villages and ethnic groups most definitely own their land. They can not be dispossessed.

h. Right to lend (rent)

Here it will be important to indicate what kind of rent (if any) is paid for the use of the land.

i. Right to mortgage

This determines whether the farmer's land parcel can be mortgaged to obtain credit.

j. Right to Product

This is the right to determine what happens to the harvest or revenue generated by a particular field.

All of these rights will be further detailed when the Senegalese example is presented.

For western economists and development planners, the idea of land rights being likened to a bundle of sticks is an appealing one, and R. Simpson is quoted or referred to in a number of tenure studies. Many scholars understand that the bundle of rights that the African farmer possesses might contain different sorts of rights than those possessed by American or European farmers. What most studies fail to do is to untie the bundle of rights: they get stuck at the level of "the farmer," or in other words, the compound head. This is wrong. Even though the compound head is usually allocated the lion's share of land rights, other compound members also possess solid rights over compound land. These rights are recognized by the whole community and often limit those possessed by the compound head. Studies which consider only the tenurial rights of the compound head are in essence stripping other compound members of their rights. If these studies are translated into policy, compound members could legally be deprived of their traditional rights over land.

If economists and development planners could overcome the two conceptualization problems discussed above, they would be forced to move beyond the realm of "the farmer" and his set of land rights, and consider the compound and its many members; most of whom have farming rights and responsibilities and carry around their own bundle of tenurial rights. In the next section of the paper, an example of the hazards of misconceptualization will be shown. Using data taken from Senegal's Peanut Basin, the Senegalese farming unit will be described and the sticks in the tenurial bundle defined and distributed within the compound. It will be shown that failure to take these steps could result in incorrect conclusions about the Senegalese tenurial system and lead to inaccurate predictions regarding the result of land tenure reforms. A brief description of Senegal's Peanut

Basin and farming system is given as background.

### *SENEGAL'S PEANUT BASIN*

Peanuts and millet are the cornerstones of Senegal's economy. Eighty percent of Senegal's population depends on agriculture for their livelihood, with peanuts and millet accounting for ninety-one percent of cultivated land. Despite continued dependence on agriculture, the ability of farmers to support themselves has become increasingly precarious. Two-thirds of Senegal's land mass lies within the Sahel, and due to drought and population pressure, even this marginal land is deteriorating. From 1960-1987, average rainfall has five times gone below the minimum for successful peanut, cotton, sorghum and maize crops. Since 1970, seven droughts have occurred in Senegal and average rainfall since 1969 has fallen to half of what was previously considered normal. Satellite pictures show that since 1977, the northern extent of vegetation has been pushed south by 200 kilometers.

The Peanut Basin is the heart of peanut/millet agriculture: it accounts for eighty percent of Senegal's peanut production and accommodates the bulk of Senegal's population. The Basin is also the area that has suffered the most from environmental degradation. The advance of the Sahara, over-worked soil, deforestation, wind erosion, a falling water table and salinization are all eroding the economic base of the Peanut Basin farmers. Like all of Senegal, the Peanut Basin has a late summer rainy season (about four months) and an extended dry season (about eight months). Rain levels in the Basin range from approximately 800 mm in the south to approximately 475 mm in the north with rains becoming more variable as one moves north. The Wolof and then Serer ethnic groups predominate in the Basin, though Peul, Lebou, Malinke, Toucouler, Nouminda, and Bambara are scattered throughout the region. As of 1980, population densities in the Basin ranged from thirty to forty people per square kilometer in the north and east, to approximately 100 people per square kilometer in the south and center districts.

Historically, land in the Basin was claimed by the first settlers by right of having cleared it by fire. These men became known as the "maitre de feu" or the "lamane." They usually claimed vast areas of land with up to six days of burning. Being unable to cultivate the totality of their holdings themselves, these men accorded use rights or "droit de hache" to men who could cultivate the land. Once given use rights, the "maitre de hache" had uncontested, irrevocable rights to that land as long as he paid a yearly homage to the lamane. Usually this

annual payment was symbolic (an ear of millet for example), but in different areas and at different times in the Basin's history, the homage payment became a substantial portion of the years harvest. Droit de feu and droit de hache were passed from father to son. In the area of the Basin where the Land Tenure study was conducted, farmers reported that the droit de feu had died out during the time of the French and that only the droit de hache remains.

Farm production is organized at the compound level. The compound is typically composed of one male who has droit de hache rights and his immediate family (wives and children). Older male children, brothers, and cousins (a category that includes just about everyone) can marry and form dependent or independent households within the compound. If male children have access to job opportunities or land outside of their father's land, they can leave their natal compound to form one of their own. The position of head of the compound, along with the land rights, is passed from father to oldest son. In the case where the oldest son is unable or unwilling to assume control, responsibility is passed to the most appropriate male (or rarely female) relative.

The compound head is responsible for distributing compound land between millet and peanut crops. He oversees the compound's millet fields and has the ultimate responsibility for assuring the food needs of the compound. If there is an independent household in the compound, the head of this household will also oversee a millet field in order to supply his household's grain needs. The millet flow between the compound and independent member households seems to be fluid, with transfers taking place in both directions. The relationship between the compound and the independent household varies from case to case.

After allocating enough land to millet production, the compound head distributes the remaining land among the various compound members for peanut cultivation. Occasionally, land is set aside for manioc, vegetables, and byssap. Compound members of any status, whether wives, unmarried older members, older male children, or heads of households, can be allocated land to cultivate for their personal benefit. Peanuts are invariably the crop of choice. The compound head also cultivates a peanut field for his own cash needs. All compound members donate labor to the compound's millet fields. Assuring enough labor for the peanut fields is usually the responsibility of each field manager and labor swaps are arranged on an individual basis. Peanut and millet fields are usually rotated on a yearly basis so that from year to year compound members do not know which field they will cultivate.

### *THE DISTRIBUTION OF TENURIAL RIGHTS WITHIN THE PEANUT BASIN COMPOUND*

From the 48 sample compounds chosen from the Peanut Basin, 118 field managers were identified. Each crop (other than millet) in each field belongs to someone in the compound, and that person, for the purposes of this study, is called the field manager. Of the 118 managers, 46 are compound heads, 30 are wives, 10 are brothers of the compound head, 18 are sons, 4 are nephews, 4 are mother to the compound head, and there is one each father, cousin, sister, brother-in-law, aunt and daughter. The task now is to decipher which kind of tenurial rights the various field managers possess and if in fact they are managers in the true sense of the word.

For a number of reasons, it quickly becomes evident that many of the tenurial sticks that might apply to other regions in Africa are not relevant to Peanut Basin farmers. First, since managers were so named because of the fact that they have claim to the produce of a given field, it is not necessary to distinguish product rights. Second, millet and peanuts are single season crops and are grown without the benefit of irrigation so that water rights and root rights are not necessary. Third, Senegalese law prohibits the sale, mortgage and rental of land. Even though these types of land transactions continue to exist, it was difficult to pose questions about them. Managers were instead asked about their right to give the field in question.

The tenurial rights that remain to be differentiated in the Basin are a) right of access to land, b) right of access to a particular piece of land, c) right to determine the crop, d) right to determine heirs, and e) right to give. The thickness of the individual tenurial bundles run the spectrum from managers with more or less tenuous access to land and no other land rights, to those who possess secure rights to a particular piece of land plus the right to determine the crop and heirs for that field and the right to give it away. The rights possessed by the various compound members serve as a check and balance to those possessed by the compound head. It is rarely the case that the compound head has exclusive control over compound land: his decisions must take into consideration the tenurial rights of all compound members. This is a fact that is easily overlooked.

The degree of right of access for managers in the Peanut Basin study was gauged through a series of questions that were asked of the manager of each field. These questions are listed below. The questions regarding right to determine heirs and right to give are also listed as they help define the extent of a manager's right to a particular piece of land.

- 1) How did you obtain this field? or, Who gave you this field to work?
  - a. Through sale or mortgage
  - b. Inherited
  - c. The household head
  - d. The compound head
  - e. The village chief
  - f. The rural council
  - g. Borrowed
  - h. The previous compound head
  - i. A relative
  - j. Other
- 2) How many years have you been the manager of this field?
- 3) Who could take this field away from you?
  - a. Nobody
  - b. The household head
  - c. The compound head
  - d. The family
  - e. The village chief
  - f. The rural council
  - g. A relative who does not live in the compound
  - h. The lender
- 4) Will you manage this field next year?
  - a. Yes
  - b. No
  - c. Do not know
- 5) Will your children operate this field?
  - a. Yes
  - b. No
  - c. Do not know
- 6) Who determines who the heirs to this field will be?
  - a. I do (i.e., the current field manager)
  - b. The head of the household
  - c. The head of the compound
  - d. The village chief or council
  - e. The rural council
  - f. A family member who lives outside the compound
  - g. The lender
  - h. Do not know
- 7) Can you give this field away?
  - a. Yes
  - b. No
  - c. Do not know

A manager with the most secure rights over a field would be one who directly inherited the field from a relative or bought the field his/herself, worked the field for a number of years, and stated that no one could take the field from them, that they will work the field next year, and that their children will operate the field. All of

the compound heads indicated that they had very secure rights of access to the field in question, while 14 brothers to the compound heads, 7 sons, 5 wives, 1 nephew, 1 father and 1 mother indicated that their rights to a particular field were very secure. Compound heads indicated that they could determine the heirs for 19 percent of the fields that they managed. They felt that they could give 15 percent of the fields that they managed.

Eleven of the field managers felt that they had rights of access to a particular field but that their rights were less secure: they had worked the particular field for over five years, but felt that the compound head could (but would not) take the field from them. Of these managers with less secure rights, 1 is a nephew to the compound head, 4 are sons, 5 wives, and 1 a brother-in-law. There is a strong possibility that the nephew and sons could obtain more secure rights as they grow older. Managers other than the compound head stated that they determine the heirs for only 15 percent of the fields that they manage. They felt that they could give only 8 percent of the fields that they managed.

Those managers with just the right of access to land (and not to a particular field) obtained the field that they worked during the survey year from the compound head and he had the right to take it away. These managers tend to work a field for just one year, moving from one field to another each year. They usually did not know if their children would operate the field unless they were the sole wife of the household or compound. These managers never have the right to determine heirs or give. This vague right of access is very difficult to gauge. It can be assumed that every field manager has some right of access, but the security or strength of that right is hard to measure. Thirty-five of the 118 managers possessed only access rights, they did not even determine the crop that they grew on their field. Of these 35 managers, 21 are wives of compound members, 8 are male children, 5 are unmarried women and 1 is an adult brother of the compound head. The male children and the adult brother may have strong claims to future tenurial rights, but it appears that women who possess just the right of access to land hold not just one of the smallest tenurial bundles but also one of the least secure. Two women in the survey were compound heads, but as a rule, women do not inherit land or have firm traditional rights over land. In difficult times, as when compound land becomes scarce (the ratio of adults to land goes up) or peanut seeds become difficult to acquire, wives are usually the first to lose their access to land and seeds. The land rights of women seem to be more closely linked to the wealth of the compound. If the compound is poor, the women are the poorest members, if the compound is rich, women are allowed access to

money making projects, i.e. peanut fields. Wives' rights to subsistence, shelter and clothing are always difficult to specify. In Senegal these rights are closely linked to the right of access to land (and seeds), and again they are difficult to specify. They should not be overlooked.

From the brief analysis given above it is obvious that the compound is most often a complex unit with numerous field managers with numerous bundles of tenurial rights. References to "the farmer" or the compound as commune gloss over the intricate nature of the Senegalese production-consumption organization. It also becomes evident that a large number of managers, compound heads and others, have secure access to a particular piece of land. Their fields are managed under the same constraints that face most owner-operators. They determine their crops and their heirs, and they have sure knowledge that no one can displace them or their children. Many of them even have the right to lend their land. The only rights that are not standard in the Senegal sample are the right to alienate land permanently from the compound and the right to mortgage. However, both of these types of transactions do take place in the Basin so these rights are not unheard of.

The compound farming organization described above seems to have been in place since "during the time of the French" when homage payments disappeared in the Basin. This system has withstood numerous French land registration drives (there was no registered land in the sample villages) and is mostly oblivious to the National Domain Law, the land tenure regime that is currently in effect in Senegal. The remainder of this paper will trace the probable impact on efficient land use and allocation that either a successful drive for individual registration or a fully enforced National Domain Law would have.

The analysis will proceed by adopting the premise supported by both Senegalese law makers and registration proponents. That premise is that secure tenure rights foster efficient land use and allocation, and that credit opportunities that are made available through the mortgage of secure rights can result in higher rates of capital investment in land. Economic theory suggests that individuals having secure tenure rights would have an incentive to make investments in land that would improve or at least maintain soil quality and productivity because they would be assured of personally reaping the benefits of their labor. With access to a credit market, secure tenure rights could be parlayed into land improving and labor saving capital investments that could increase agricultural income in both the short and long run. Economic reasoning also suggests that where compounds with tenure security have the right to sell or lend land, allocative efficiency would result. With an active land

market, those compounds that value land most highly will be able to buy or borrow land from compounds that have a lower valuation of land. Now let us turn to the case of land titling or registration.

### *LAND REGISTRATION*

A number of development planners advocate formal land registration on the grounds that it is the only way to secure tenure rights and introduce mortgage credit to rural Africa. In light of the complexity of the compound structure, the question immediately arises as to who's name to register compound land under. The most obvious choice is the compound head, his is the name that appears on all administrative lists, from village to cooperative. But, if all compound land is registered in the compound head's name, the primary logic for registration breaks down. The compound head becomes more secure in his control over compound land, but the other field managers are dispossessed of their tenurial rights. The link between tenure security and efficient land management is broken. The compound head would be vested with the legal authority to sell, rent or mortgage land, and the tenurial status of the other compound members would become very insecure. For example, in Senegal, prior to the passage of the 1964 law, private citizens had the opportunity to register land. Registered land represents less than one percent of Senegal's land mass. In the Peanut Basin, only 13 parcels of registered land were found by consulting the cadastre office and through informal research. It is interesting and discouraging to note that 8 out of those 13 parcels involve cases where a compound head or a traditional or religious authority usurped the traditional tenure rights of relatives and village neighbors. In 6 of the 12 cases the land was then sold or repossessed because of failure to reimburse mortgage loans. Registration clearly represents a threat to the tenure rights of wives, brothers, sons, etc. Managers who once had secure rights of access to particular fields would definitely lose that security. Even those managers with the right of access to land in general would lose their small bundle of tenurial rights. This corresponds to 96 fields that would be less efficiently managed as a result of registration in the name of the compound head.

Another registration option is to register land in the name of the manager with the most secure rights to that particular piece of land. This would amount to compound heads, and dependent and independent household heads having their traditional rights of access to a field legally recognized. Wives and younger compound members would again not be legally ensured of continued right of access to land and their incentive structure would thus be weakened. In addition, this detailed registration strategy would pose a number of difficulties.

Three of them are listed here.

First, Senegal is still processing registration claims that were filed in the two year grace period granted by the 1964 National Domain Law. The number of requests for registration was staggering, almost 13,000, but many of these had already had cadastral surveys done, and twenty-four years is a long time. The bureaucratic machinery that would be needed to handle the complicated registration of not just compound heads but other compound members as well could well prove impossible to maintain.

Second, within the compound, the distinction of where one member's tenurial bundle stops and another's begins is often very hazy. The legal and social battles that could result from a registration effort of this type could be overwhelming. Simple registration schemes often trigger violent boundary disputes between neighbors, a detailed registration scheme could cause a terrible amount of friction within compounds.

Third, to date, Senegal has not experienced a land fragmentation problem like these experienced in some countries of East Africa. In Senegal, land that remains within the compound can be aggregately managed. Fields can be joined together to support overlapping crops, or fields can be redistributed among field managers to achieve proper crop rotation. Though tenure bundles are individualized within the compound, land use strategies can be organized at the compound level. Private registration could weaken the compound structure and result in a greater degree of land fragmentation.

With either compound head or detailed registration, the land improvement, efficiency incentive motivation for individualized registration breaks down when confronted with the complexity of the compound. The second motivation that registration proponents advance is that registration is necessary to introduce mortgage opportunities for farmers seeking to make land improving or labor saving investments. It could well be true that mortgage is a good vehicle for suppling credit to rural Africa, but as in any case where land could be irretrievably alienated from the compound, the tenure rights of other compound members must be protected. In the Peanut Basin, 6 out of the 7 registered landowners who had mortgaged their land had failed to make the loan payments and their land was repossessed.

Registration done with a scalpel might be able to achieve improvements in tenure security and the accessibility of rural credit, but registration that does not cut finely enough to guarantee the protection of all of the compound member's rights to land could prove disruptive and detrimental to proper land management. Now let

us look at the case of Senegal's National Domain Law.

### *THE LAW OF NATIONAL DOMAIN*

In the early 1960's, when Senegalese law makers were contemplating what type of land policy the newly independent nation would adopt, their appraisal of the current tenure situation was a gloomy one. They characterized the traditional farming structure as backward and inefficient. A quote from the Office of the Minister of Finance and Economic Affairs sums up their contempt for the customary system.

L'encadrement coutumier constitue en effet, un element retrograde n'offrant aucune possibilite d'investissements createurs et bloquant tout developpement moderne. Le proprietaire eminent n'a aucun interet a realiser les ameliorations indispensables a l'augmentation du rendement puisque ses revenus fixes par les coutumes n'en seraient pas modifies. Quant au tenancier dont le statut est toujours dependent et qui des lors, n'a pas d'autre interet que celui de faire rendre a la terre le maximum pendant le temps limite dont il en dispose a titre precaire, il se saisit fort peu du maintien de la fertilite des sols et encore moins de leur enrichissement.[2]

Law makers felt that the once customary token that compound heads paid to their "maitre de feu" had been manipulated into an onerous yearly rent on compound land. They were also acutely aware of the growing power of the Islamic Brotherhoods and dishonest land speculators. Law makers viewed the situation that was developing in 1964 as one of neofeudalism with religious leaders and civil servants establishing themselves as grand overlords with groups of dependent laborers such as migrant workers or disciples working their vast land holdings. The land law they drew up was written with the intent of putting a stop to land speculation and curbing the growth of massive land accumulation by the few and widespread landlessness of the many. The National Domain Law was passed in 1964.

With the Law of National Domain, all land that had not been registered prior to 1964 or within the two year period granted by the law became part of the National Domain and hence came under State control. Ninety-nine percent of all Senegalese land fell into the National Domain. In rural areas, National Domain Land is administered by democratically elected rural councils. Farmers possess use rights over land that they actively cultivate, but the councils have the right to redistribute land that is inadequately used. Farmers have no transaction rights: they cannot sell, lend or mortgage land. All transactions, including inheritance, are legally under the control of the rural councils.

When writing the National Domain Law, the concept of the compound and the rural farming system that the law makers were working with, was one of a purely communal compound system fallen prey to crafty land-

lords. They felt that the rights to lend, mortgage, and sell did not exist in the context of the communal compound, and that only the landlords rights were individual and these were proving a shackle to the agricultural system. Law makers felt that in allocating all land to the National Domain the State would simply be assuming the position of "maitre de feu" and that the State would prove a less taxing landlord than many real "maitre de feu." They felt that the new land law would not be obtrusive to the compound or the farming system.

In the Peanut Basin sample, the original law makers' conception of the compound has been shown to be incorrect (or to have changed since 1964). Tenure rights are individualized within the compound and the rights to lend and even mortgage and sell land do exist. The National Domain Law has introduced an element of insecurity into the compound's tenurial system. In the words of one Peanut Basin farmer, "All we ever had was the land and now they've taken that away from us."

To date it seems that rural Senegal has been largely successful in ignoring the Domain Law, and this result is aided by the fact that the rural councils have tended to inactivity. But, farmers are not ignorant of the law, and the element of insecurity that it has introduced into the system could be working to weaken the incentives for investments in land improvements and allocative efficiency. Both of these possibilities are explored below.

With the 1964 land law, farmers in Senegal officially lost the right to determine who would inherit their land; it became unclear whether their children would have access to the compound's land or even if current compound field managers would be denied access at some future date due to "inadequate" land use. In light of standard economic theory, it is interesting to explore what effect this law had on investments in land improvements in the Peanut Basin sample. A major difficulty arises in trying to surmise the possibility of decreased land improvements: rural Senegal has never practiced most land improving techniques. Land investments such as bunding, fencing, terracing, liming, digging of wells, or fertilizer or manure use were rare if not nonexistent in the survey sample (and there was no evidence that these technics had ever been used). The only types of soil saving technologies that are prevalent in the Basin are the use of fallow periods and crop rotation. The analysis below will focus on the use of fallow land.

Three hypotheses can be made about fallow in light of the Law of National Domain and its influence on tenure security. First, because usufruct rights are the only rights guaranteed under the 1964 law, and because

these rights are vested for an indefinite period of time with no assurance that land will be inherited by compound members, incentives to invest in fallow will be diminished. A greater degree of permanent cultivation leading to land deterioration might then be expected. The second hypothesis is that there would be a tendency for the amount of fallow to increase because of the illegality of informal lending. Farmers who perceive that lending of land increases the likelihood that land will be redistributed by the rural council to the borrowers on the premise that lent land must be more valuable to the borrowers than to the "landlords," may prefer to keep land idle (and in compound control) rather than lend it to another compound. The third hypothesis is that because active cultivation of land is the only basis of legal ownership, the amount of fallow would decline. In an effort to secure usufruct rights over their holdings, compounds have the incentive to adopt extensive planting strategies. It is difficult to determine which of the hypotheses holds true, probably some combination of the three. There is evidence to support all three.

The possible impact that the National Domain Law has had on allocative efficiency could be either enormous or negligible. If the rural councils are active in redistributing land in response to the changing needs of the compound and changing economic conditions, then an efficient allocation of land is possible in the community. However, if rural councils restrict land transactions, or base allocations on other than economic criteria, inefficient allocation of land may result. In the case that land transactions are restricted, compounds that have large holdings of land because of an initial large family size or early arrival into the area, would continue to remain large even if there was a reduction in family size. They would legally be unable to lend out their excess land. Conversely, compounds that laid claim to small holdings of land would not be able to expand their holdings as the family grew and children came of an age to cultivate compound land.

Research shows that in fact no land was reallocated by the rural councils in at least the last eight years. However, this failure on the part of the legal system does not appear to have resulted in a severe misallocation of land. Instead, an illegal market in land exists that is very active. Land is freely lent among villagers, and land sales occasionally take place. More than 80 percent of all compounds in the study had borrowed or lent land at the time of the study (usually with compounds that were not included in the sample). Though some farmers expressed concern about unscrupulous borrowers trying to lay claim to borrowed land, others had no such fears saying "We don't practice the law here."

*CONCLUSION*

It has been shown that inaccurate characterization of the compound's farming and tenure systems will result in incomplete and incorrect tenure policy recommendations. These recommendations are incomplete in that they do not provide a legal framework to protect the traditional rights of all field managers. They are incorrect in that their theoretical rationale is eroded through failure to incorporate the motivation structure of every field manager. A complete and correct tenure policy would depend on a detailed study of compound organization.

## FOOTNOTES

1. R. Simpson, pg 7.
2. Peytavin, page number unavailable. Translation: The customary system constitutes a regressive element that offers no possibility for creative investments and blocks all modern development. The official landlord has no interest in making improvements in the land that are indispensable for increases in output because his revenue, which is determined by tradition, will not change. As for the tenant, who has a dependent status and who therefore has no interest other than to reap the most possible from the land in the limited time that he possesses his precarious use right, he has little concern for the maintenance of the soil's fertility, and even less for its enrichment.

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