

## REGIONAL DIFFERENCES REGARDING LAND TENANCY IN RURAL RWANDA, WITH SPECIAL REFERENCE TO SHARECROPPING IN A COFFEE PRODUCTION AREA

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**ABSTRACT** This paper examines land tenancy systems and tenant contracts in Rwanda, with respect to socioeconomic contexts. Our research in southern and eastern Rwanda produced data suggesting that land borrowing with fixed rents has been generally practiced, and that rent levels have been low in comparison to expected revenues from field production. In the western areas of coffee production, however, the practice of sharecropping has recently appeared. This system is advantageous to landowners, as they are able to acquire half of the harvests; in addition, the fixed rent levels in this region are much higher than those of other regions. In the southern and eastern regions, because land borrowing with fixed rents has been the only tenancy pattern and rent levels have remained low, the economic situation should be interpreted in the context of a continuing traditional Rwandan land tenure system. In contrast, in the western coffee production area, the soaring of fixed rents and the emergence of sharecropping have been brought about by high pressures for land use, which were caused not only by a population increase but also by the development of cash crop production and the existence of a labor exchange system. The increase in rent levels has therefore been offset by a corresponding increase in agricultural productivity.

**Key Words:** Coffee; Land; Rwanda; Sharecropping; Tenancy.

### INTRODUCTION

Transactions involving land, such as selling, buying, renting, and borrowing, have been widely observed in Rwanda. One of the most densely populated countries in Africa, Rwanda has a population of over 8 million inhabitants occupying an area of approximately 25,000 km<sup>2</sup>. Although this is a well-known fact, detailed analyses of Rwandan land transactions and land tenure systems based on field research have yet to be adequately conducted.

Land tenancy, that is, the borrowing and lending of land, is an important component of the Rwandan land tenure system. During the colonial period, this problem drew much attention as it was considered to be one of the pillars of Rwandan traditional rule. For this reason, colonial administrators were concerned with the problem, writing numerous monographs on land tenure systems and questions of tenancy (Reisdorff, 1952; Adriaenssens, 1962). After Rwanda's independence, while the problems of overpopulation and land scarcity continued to attract the attention of scholars and policy makers (Guichaoua, 1989; Bart, 1993), it was not until the 1990s that research directly focusing on land tenure

issues appeared (Blarel, 1994; André & Platteau, 1996; André, 1998; André & Lavigne-Delville, 1998). The civil war and genocide of the 1990s raised concerns of land scarcity, considered to be one of the main causes of social tension in rural societies that led to the genocide. After the Rwandan Patriotic Front (RPF) took power, the government led by the RPF declared their intention to reform land laws, thus raising these concerns on a national level. The new land law was adopted in 2005, and problems about land continue to be mentioned in many policy papers. However, despite its prominence as a national issue, neither national surveys nor field research on land tenure have been systematically carried out in Rwanda<sup>(1)</sup>.

Since 1999, during field research, we have observed several instances of land borrowing and lending, and have already pointed out their importance to Rwandan land tenure (Takeuchi & Marara, 2005). In addition, in 2005, we recorded sharecropping practices in an area of coffee production in western Rwanda. No previous research has discussed sharecropping in Rwanda. Sharecropping in western Rwanda appears to be a relatively new practice that emerged after the civil war in the 1990s. We therefore believe that cases of sharecropping in the region should be examined in the context of the entire Rwandan land tenancy system.

The purpose of this paper is twofold: to clarify practices of land tenancy in Rwanda from data acquired from three research sites, and to reflect on the relevance of different tenant contracts between regions. In order to consider the latter problem, the fact that sharecropping recently emerged in a coffee production area is an important point. Did coffee production influence the emergence of sharecropping? How can we interpret the institutional differences between these areas? We know that the population increase is a very important condition in determining rural institutions (Boserup, 1965). Were other factors involved in influencing institutional change? In this paper, we will examine and address these questions.

## RESEARCH SITES

Since 1999, we have conducted rural surveys at two research sites in southern and eastern Rwanda. The first site is a cell in Mukura Sector in the Huye District, of the Southern Province. Our second site is a cell in Murundi Sector in the Kayonza District, of the Eastern Province. We will refer to the former as Cell M and to the latter as Cell R. The Rwandan local administration system is composed of province, district, sector, and cell. As a result of reforms in 2001 and 2006, the administrative units of each level were unified and enlarged (Fig. 1). This meant that in 2006, the size of a present cell became as big as that of a pre-reform sector. In 1999, after having conducted a rural livelihood survey for about 100 households in each cell (former sector), we selected 21 households in Cell M and 22 in Cell R whose heads of household permitted us to measure all of their owned and managed lands<sup>(2)</sup>. We took the measurements ourselves, as this seemed necessary to grasp the exact area of the landholdings. As we had included some households of the chiefs of former cells (this position was called

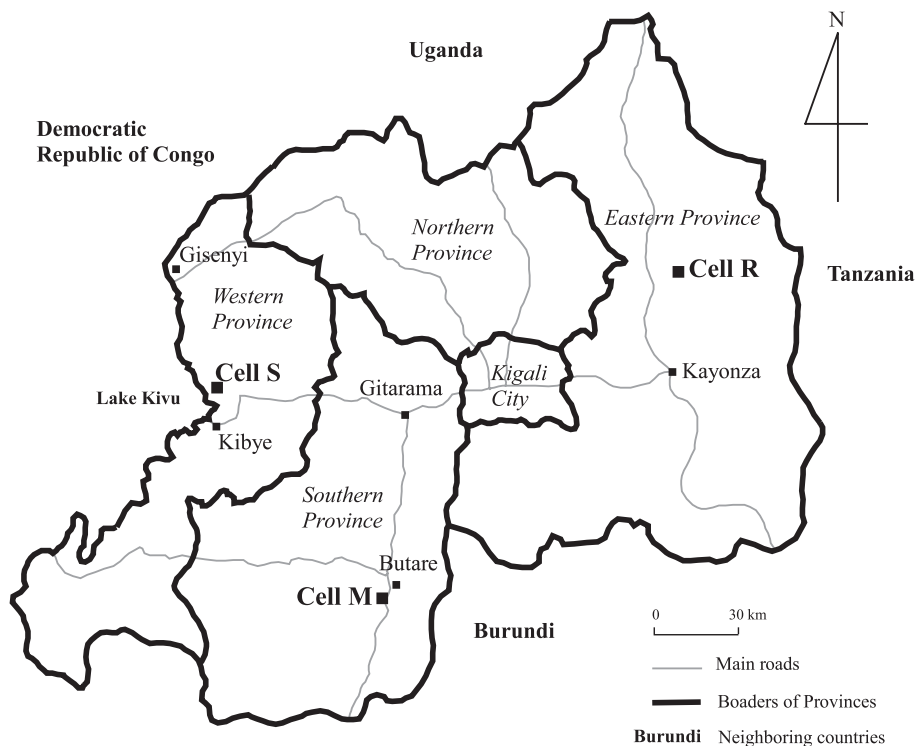


Fig. 1. Rwanda: Administrative Units, Main Roads, and Research Sites.

“Responsables”) and the former sector (“Conseiller”) in our data since 2000, the total number of households included in the study rose to 25 households in Cell M and 26 in Cell R. In addition to measuring their lands, we continued to conduct research over a 5-year period on land use during each year, the agricultural management practices, and the households’ life histories, including experiences during the civil war in the 1990s<sup>(3)</sup>.

We began research in the Western Province in 2005. After organizing a general survey of 120 households in two former sectors in Gisunzu District in Kibuye Province, we decided to concentrate our research on a sector near Lake Kivu, where plots of owned land had already been established and measured. The measurement of land was conducted under bureaucratic initiatives of the district from 2002 to 2003. This was probably because the government planned to stipulate the registration of land as an obligation in the new land act, which was then under discussion<sup>(4)</sup>. At the beginning of the measurement project, the local administration took the initiative of employing local assistants to measure lands, who took measurements of the lengths of each side of all of the fields. Several months later, however, the budget was cut off for this project and measurement procedures were abruptly suspended. In 2006, the local assistants were still complaining that they had not yet received any salary. After the project ended, many of the notes on which assistants had recorded land measurements were

scattered and lost. Nevertheless, we found several notes that were held by the inhabitants themselves. Of these, we chose 26 households from a cell in Mushubati Sector, Rutsiro District, of the Western Province (hereinafter, Cell S), with which we conducted interviews in 2006 concerning land use. Although it is clear that these 26 households cannot represent Cell S in a statistical sense, we decided to continue our analyses using these data based on our impression during fieldwork that they were relatively unbiased.

The geographical conditions of the three research sites are quite different from each other. Western Rwanda is situated next to Lake Kivu, the altitude of which is around 1,500 m above sea level (Photo 5-1 & 5-2). A range of mountains also stretches from north to south through the western area, making this the nation's region of highest altitude. From the mountains, the altitude gradually descends at the easternmost part. The Rwandan climate is conditioned by this landscape; the farther one travels to the east, the warmer the temperature becomes and the lesser the precipitation. In the area around Cell R of the Eastern Province, the altitude is about 1,300 m asl and the annual precipitation is slightly less than 1,000 mm. In contrast, in both Cells M and S, precipitation reaches about 1,500 mm and the temperature is cooler than the eastern part of Rwanda.

Called "a country of a thousand hills," the typical Rwandan landscape comprises countless hills continuing as far as the eye can see. While the scenery around Cells S and M fits this image (Photo 5-1 to 5-4), hills around Cell R are much more gradual (Photo 5-5 & 5-6). In contrast, the slopes of the hills around Cell S, which is near to the mountainous area in the center of the Western Province, are generally much steeper than those of the other research sites.

As the climate of the Western and Southern provinces is suitable for agriculture, these densely populated regions (see Table 1) had been the center of the Kingdom of Rwanda since precolonial days. Today, ironically, the high population density has turned into a severe constraint on agriculture by causing subdivision of the land. Table 2 indicates Rwandan households' landholdings in 1990. While the national average of a household's landholding was about 1 ha, that of cultivated land was only 0.6 ha. In densely populated areas of the Western and Southern provinces, landholdings were especially small, thus creating severe land constraints and serious poverty problems in these rural societies. According to a 6,450-household survey on poverty carried out from 1999 to 2001, the population ratio of those living below the poverty line was the biggest in Gikongoro Province (present Southern Province, 77.18%), followed by Butare Province (present Southern Province, 73.62%), and by Kibuye Province (present Western Province, 72.48%) (République Rwandaise, 2002: 33).

The production of coffee is an obvious difference among the three research sites. Coffee production is very active in Cell S, which is situated on the shores of Lake Kivu in one of the most important coffee production regions in Rwanda. We will see later that many households in Cell S are engaged in coffee production. In contrast, it is not important among households of Cells M and R. In fact, the OCIR-CAFE (the national office for the promotion of coffee) does not provide technical assistance to areas including Cells M and R<sup>(5)</sup>. This means that the OCIR-CAFE does not consider them to be important areas of coffee

**Table 1.** Population and Population Density in Rwanda.

Province (in 2003)	Province (after the reform in 2006)	Population	Area (km <sup>2</sup> )	Population Density per km <sup>2</sup>
Kigali City	Kigali City	608,141	313	1,943
Gitarama	Southern	864,594	2,141	404
Butare	Southern	722,616	1,872	386
Gikongoro	Southern	492,607	1,974	250
Changugu	Western	609,504	1,894	322
Kibuye	Western	467,745	1,748	268
Gisenyi	Western	867,225	2,047	424
Ruhengeri	Northern	894,179	1,657	540
Byumba	Northern	712,372	1,694	421
Kigali Ngali	Eastern/Northern	792,542	2,780	285
Umutara	Eastern	423,642	4,230	100
Kibungo	Eastern	707,548	2,964	239
Total/Average		8,162,715	25,314	322

Source: République Rwandaise, Ministère des Finances et de la Planification Economique, Commission Nationale de Recensement, Service National de Recensement 2003a. *Recensement général de la population et de l'habitat Rwanda: 16–30 août 2002, Rapport sur les résultats préliminaire*. Kigali, p. 17.

Note: Correspondences between provinces after 2006 and those in 2003 are approximate.

**Table 2.** Average Household Land Holding by Province (1990, Season A).

											(unit: ha)
Province in 2006	Kigali City	Southern	Southern	Southern	Western	Western	Western	Northern	Northern/ Eastern	Eastern	Average
Province in 1990	Kigali City	Gitarama	Butare	Gikongoro	Changugu	Kibuye	Gisenyi	Ruhengeri	Byumba	Kibungo	
Cultivated area	0.65	0.65	0.51	0.51	0.51	0.67	0.44	0.64	0.68	1.00	0.62
Cultivable area	0.88	0.90	0.73	0.78	0.59	1.17	0.49	0.75	1.02	1.39	0.86
Total area	0.94	1.02	0.84	1.03	0.67	1.68	0.56	0.96	1.14	1.49	1.01

Source: République Rwandaise, Ministère de l'agriculture et de l'élevage 1992. *Enquête nationale agricole 1990: Production, superficie, rendement, élevage et leur évolution 1984–1990*, Kigali, p. 46.

Note: 1) Season A indicates the cultural period between October and March, i.e. from October 1989 to March 1990.

2) No distinction was made in this statistics between owned land and managed land.

3) Provinces in 2003 (Table 1) and those in 1990 (Table 2) were not perfectly corresponding because of the reform that took place after the civil war.

production.

Conditions of access to markets also vary across the three research sites. Cell M is situated along the paved road connecting Butare, one of the most important cities in Southern Rwanda, to Bujumbura, the capital of Burundi. Traveling from Butare, it takes only 15 to 20 minutes of driving to arrive at Cell M. Even if some inhabitants live far from the paved road, they can arrive at Butare after a 1-hour walk. The cell is in the suburbs of Butare. Cell R is situated next to the national park in the eastern border area. Coming from the paved road connecting Kayonza, a key traffic center in eastern Rwanda, to the Ugandan border, and entering the area from a point along Lake Muhazi, this cell can be reached by a drive of about 10 km. Researched households are scattered throughout this large

and sparsely populated cell. Cell S is situated about 10 km from Rubengera, a town along the paved road between Gitarama and Kibuye. The territory of this cell borders Lake Kivu, and is covered with steep hills. Driving 10 km on an unpaved road takes over 40 minutes, and many parts of Cell S are inaccessible by car.

These three research sites also have different histories of land acquisition. This is an important point to consider in examining the characteristics of land use, which can be influenced by the length of time since land acquisition. Of the three research sites, Cell M, situated near the capital of the precolonial kingdom, was the earliest area to be settled. According to our interviews, the ancestors of current inhabitants generally moved to this area in the period between the end of the 19<sup>th</sup> century and the beginning of the 20<sup>th</sup> century. Current inhabitants still live on the hills their ancestors began to settle and cultivate, and consider them to be the originators of their lineages.

The ancestors of the current inhabitants of Cell S moved to the area during the late colonial period. They told us in interviews that the area had been pastureland, an “*igikingi*” (plural, “*ibikingi*”) owned by a Tutsi aristocrat, and had therefore been sparsely populated until the middle of the colonial period<sup>(6)</sup>. An important change occurred when the colonial administration nominated a subchief for this area. Subchiefs who were nominated by colonial administrators typically encroached on the “*ibikingi*” by making their own subjects settle inside in order to enlarge their zone of influence, leading to power struggles with traditional chiefs who had acquired the “*ibikingi*” from the king. During the interviews, a number of inhabitants told us that their fathers or grandfathers had acquired their land from a subchief during the colonial period.

Settlement of Cell R began during the 1970s, when increasing migration from densely populated northern Rwanda brought a lot of people to this area. Until then, this area had been considered a part of the national park, and it was prohibited to live there. Although the exact reasons remain unknown, during the 1970s, the administration permitted settlements. The region also saw a sudden population increase in the 1990s. As soon as the civil war ended with the victory of the RPF in 1994, Rwandan refugees who had lived abroad since the end of the colonial period returned *en masse* to their homes. Many of those refugees, who were mainly Tutsi and termed Old Case returnees, settled in the eastern part of the country, where land was relatively abundant. Under the guidance of the local administration, they acquired their lands by dividing them with the original inhabitants of the region (Takeuchi & Marara, 2005). The majority of the inhabitants of Cell R therefore started to live there after the 1970s; they are the first generation of immigrants.

## LANDHOLDINGS IN THE THREE CELLS

Table 3 indicates the situation of landholding among the three cells. Although we concede that the researched households do not represent the whole in a statistical sense<sup>(7)</sup>, the data reveal several significant characteristics of landholdings

**Table 3.** Land Holdings of Researched Households.

	Cell M	Cell R (1)	Cell R (2)	Cell S
Number of researched household	25	26	25	26
Year of research	2003	2003	2003	2006
Average managed land (m <sup>2</sup> )	5,750	15,426	11,308	4,552
Maximum (m <sup>2</sup> )	25,061	118,387	37,254	16,324
Minimum (m <sup>2</sup> )	0(350)	0(928)	0(928)	1,445
Gini coefficient	0.52	0.51	0.37	0.36
Average owned land (m <sup>2</sup> )	6,064	13,425	10,278	3,718
Maximum (m <sup>2</sup> )	40,892	92,107	37,254	15,093
Minimum (m <sup>2</sup> )	399	928	928	695
Gini coefficient	0.58	0.50	0.39	0.38

Source: Survey data by the authors.

Note: 1) In the calculatoin of the Cell R (2), we excluded an extremely big land holder (R29), who owned 9.2 ha and managed 11.8 ha.

2) Households that have no managed land, were dead or emigrated to neighboring countries. We indicate between parenthesis the minimum number except them.

in these cells.

Narrowness of landholdings is a common feature of the three cells. The average area of the managed land per household is very small: around 0.5 ha at Cells M and S, and around 1 ha at Cell R. While the average landholdings at Cell R are relatively large in comparison with the other two cells, the managed lands of 13 households among 26 were less than 1 ha. Conditions are more severe in Cells M and S: households whose exploited lands were beyond 1 ha were only five and two, respectively. Our data also confirmed that narrowness of landholdings basically characterizes Rwandan rural society.

We can also point out differences among sites. The average size of a landholding is clearly larger at Cell R than at Cells M and S. In addition, as levels of the Gini coefficient show, the gap among researched households' landholdings is wider for Cell M than Cell S. Although the figure for Cell M in Table 3 may be biased because of the inclusion of political leaders, even the calculation of the Gini coefficients, which excluded the households added from 2000, supported our conclusion<sup>(8)</sup>.

Later, we will detail some important aspects of rural societies; here, we provide simple profiles of the largest landowner, M56, and the largest land user, M106, in Cell M. M56 was a Tutsi woman born in 1966. As her husband, a Hutu, had been arrested on the suspicion of genocide, she lived alone with her children. During the civil war and genocide, she survived by hiding in her house, while most of her family members were massacred<sup>(9)</sup>. As a result, she inherited the lands of her massacred family members, thus becoming a landowner of more than 4 ha. She loaned out the majority of her owned lands because it was simply impossible for her to exploit all of them herself.

M106 was a Hutu man born in 1963. His family was not originally from Cell M. His father had come to the area from a neighboring province and acquired lands to cultivate. Consequently, the portion of lands that M106 had inherited from his father was only about 0.2 ha. Nevertheless, he earned money by doing

miscellaneous jobs such as cutting planks, and actively bought several fields. Moreover, he carried out many economic activities such as borrowing fields for cultivation by wageworkers, brewing banana and sorghum beer to sell from his bar, and trading agricultural products and livestock. Due to the success of these entrepreneurial activities, he was considered one of the richest men in the cell. In contrast to these big landowners, five canvassed households held less than 0.1 ha of land. Clearly, differences of landholding size were considerable in Cell M.

Differences in the size of landholdings among households at Cells R and S were smaller than those at Cell M. With respect to Cell R, the most important reason for the relative equality of landholding in this cell was the practice of dividing land between Old Case and New Case returnees (Takeuchi & Marara, 2005). The Old Case returnees (refugees) signify those who had fled the country after 1959 due to a series of conflicts and persecutions mainly against ethnic Tutsi, and who had returned after the victory of the RPF in the civil war during the 1990s. The civil war that broke out in 1990 was caused by these refugees, who had formed an armed guerrilla faction, the RPF, in Uganda and invaded Rwanda. After the victory of the RPF, the Old Case returnees came back *en masse* to their homeland. However, the majority of them settled, under the guidance of local administrations, in the eastern part of the country, as it was a relatively sparsely populated area in Rwanda. They acquired land by dividing it equally with the original inhabitants. When the Old Case returnees came back and settled in eastern Rwanda, the original inhabitants, mainly Hutu, were absent, as they had fled the attacks of the RPF to neighboring countries. That is why they were called New Case refugees (returnees). When they came back to their homeland 2 or 3 years later, Old Case returnees were already established there, and they were obligated to divide their land and give half to Old Case returnees. As a result, some households in Cell R held exactly the same area in terms of fields.

How did farmers acquire their lands? Table 4 indicates the composition of

**Table 4.** Composition of Managed Lands by Means of Acquisition.

	Cell M (2003)		Cell R (2003)		Cell S (2006)	
	area	%	area	%	area	%
Inheritance	67,677	47%	75,218	19%	68,791	58%
Purchase	31,911	22%	113,955	28%	12,729	11%
Donation	13,186	9%	149,356	37%	14,371	12%
Borrowing with fixed rent	30,968	22%	62,551	16%	11,519	10%
Sharecropping	0	0%	0	0%	10,950	9%
Total of managed lands	143,743	100%	401,079	100%	118,359	100%

Source: Survey data by the authors.

Note: "Inheritance" refers to acquisitions of lands on the basis of patrilineal principle; "purchase" means those through transactions with money; "donation" signifies perpetual acquisitions by transfers without money; "borrowing with fixed rent" refers to temporal acquisitions of usufruct by paying fixed rent (including cases of which the rent is free of charge); "sharecropping" means temporal acquisitions of usufruct by carrying out sharecropping.



managed lands in the three research sites. It shows that in Cell M, 47% of the total land was acquired by heritage, 22% by purchase, 9% by donation, and 22% by borrowing. This table shows some interesting points. On one hand, inheritance was not very important in the practice of land acquisition: the proportion of inheritance varied from 58% in the largest case (Cell S) to 19% in the smallest (Cell R). On the other hand, acquisition of managed lands through borrowing and purchase was commonly observed, reaching levels of 30 to 40%. Although it is likely that inheritance had originally been the main method of land acquisition, it has now been replaced by other means such as borrowing and purchase.

Although in this case, donation refers to the permanent acquisition of land through transfer without money, its concrete meanings differ among regions. At Cell M, “donated lands” mean those in swamps between hills (see Photo 5-3). Traditionally, swamplands had been used for pasture in the dry season, as they would sink into water in the rainy season. That was why land rights had been ambiguous there in comparison with higher lands, on which each lineage or family had clear rights. As a result of the development policy carried out by the colonial administration, swamps became cultivable throughout the entire year, thus leading to their random occupation by nearby inhabitants. Although after the independence, it was stipulated in the constitution that the land in Rwanda belonged to the state, the government admitted *de facto* usufruct in swamps. That was why the inhabitants of Cell M perceived that lands in swamps were “donated” by the state.

The reason for the considerable proportion of “donated” lands at Cell R was, as explained above, the division of land between Old Case and New Case returnees. As the divisions were carried out under the guidance of the local administration, Old Case returnees tended to consider that land was donated not by New Case returnees, but by the state. Cell R was the only one of the three research sites at which such division of land was actively conducted.

Donated lands in Cell S, which comprised over 10% of the total managed land, were neither swampland nor acquired by division. In this cell, friends often donated fields to mark occasions of festivity, such as marriage. This custom, which was observed only in Cell S, continues to be carried out<sup>(10)</sup>. Throughout Rwanda, cows are typically given away on festive occasions. It appears that people in this region give away fields in the same way that others give away their precious cows<sup>(11)</sup>.

Were the modes of land acquisition influenced by the economic conditions of the households? In order to approach this question, supposing that the size of managed land represents economic stratification, Figs. 2 to 4 show the composition of land according to the size of exploited land. Forming four groups in order of the size of managed land, these figures indicate the composition of land acquisition by each group. They clarify several facts about the relationships between the composition of land and economic stratification.

In Cells M and R, purchased lands mainly appear among groups of households with large areas of exploited lands. We can thus consider that the land purchases were mainly carried out by members of an economic upper class with extensive managed lands. In contrast, the proportion of borrowed land is important not only in small land-size groups, but also in the largest land-size group (especially at Cell M). It shows that upper class farmers accumulated lands by purchasing as

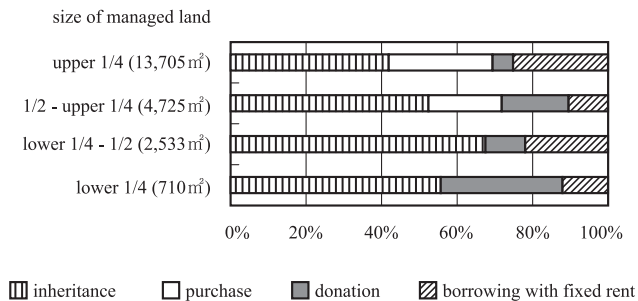


Fig. 2. Composition of Managed Lands by its Size at Cell M.

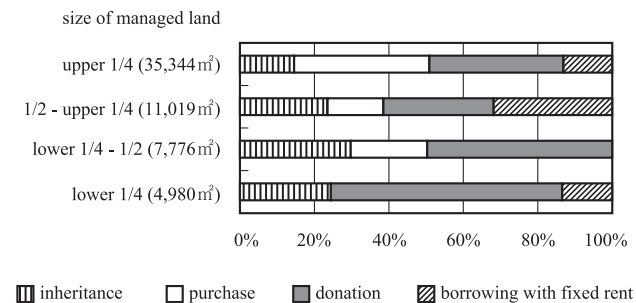


Fig. 3. Composition of Managed Land by its Size at Cell R.

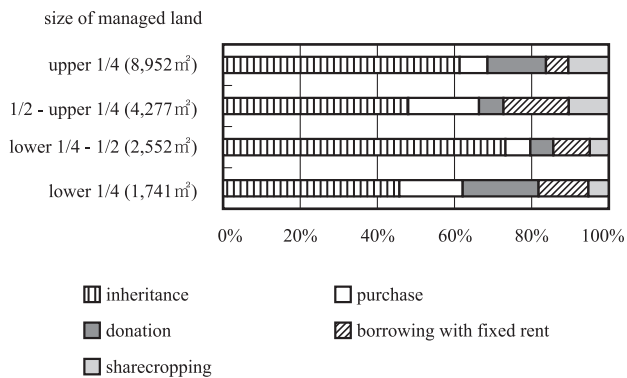


Fig. 4. Composition of Managed Land by its Size at Cell S.

well as by borrowing.

In comparison to Cells M and R, characteristics of Cell S are difficult to determine from Fig. 4. Land purchasing as well as sharecropping were carried out by the largest land-size group as well as by the smallest land-size group. Fig. 4 indicates that land size was not an adequate indicator for economic stratification in this cell. During our interview visits to Cell S, we had the impression that households that appeared to be rich did not necessarily have large farms<sup>(12)</sup>. Those who appeared rich generally carried out such economic activities as retail shop management and vegetable production; their household heads tend to be relatively young and did not manage large farms.

## LAND TENANCY IN THE SOUTHERN AND EASTERN PROVINCES

### I. Level of Rent

In this section, we analyze land tenancy with fixed rents in Cells M and R. Land tenancy with fixed rents, widely observed in Rwanda, is generally conducted as follows. Under contract, a borrower temporarily uses a field in exchange for payment of rent, and in some cases, for free; the borrowers can decide what to plant. Borrowers are in charge of all labor for cultivating the borrowed fields, and can use or sell the products they harvest. While the contract period is normally a year, it is possible to make a contract for a single cultivating season or for several years. While payment is usually advanced in cash, it can also be determined during cultivating season or at its end in some cases; when and how a borrower pays rent depend on negotiations with the landowner.

Although a borrower can select what to plant, he or she does not have the right to harvest perennial crops such as coffee and banana in borrowed fields. In some cases, however, borrowers make a contract to harvest perennials; in Cell M, we found this kind of land tenancy involving bananas. We refer to this as the “banana” type of borrowing, distinct from the “ordinary” type, in which borrowers do not have any right to perennial plants. The “banana” type of borrowing was mainly carried out by two farmers in Cell M, including M106, whom we introduced above. They use this contract to collect bananas for brewing beer, which is sold nearby.

Table 5 presents information about land tenancy with fixed rents at Cells M and R, consisting of 269 cases we collected from 1999 to 2003. According to this table, we can point out several characteristics of land tenancy in these two cells.

The table shows an interesting fact: many fields were loaned out for free. Under the “ordinary” type of land tenancy at Cell M, 24% was loaned free of charge<sup>(13)</sup>. The ratio increases up to 41% at Cell R. When we asked the reasons for free rent, farmers explained using economic and social reasons. For example, it was often said that rent was free if you borrowed lands that had been left fallow, as they demand much labor for cultivation. In addition, we often heard the explanation that the rent was free because they had borrowed from a family member, especially

**Table 5.** Borrowed Fields and Rent Level (Cell M & Cell R).

	Cell M		Cell R
	“ordinary”	“banana”	“ordinary”
Number of total investigated fields in tenancy	140	41	88
Average area (m <sup>2</sup> )	566	1,369	3,763
Number of fields : rent=0	34	4	36
(%)	24%	10%	41%
Number of fields : rent>0	106	37	52
(%)	76%	90%	59%
Average rent per one square meter (Frw)	2.26	4.83	1.42
Regression between rent and area of field			
Y (rent)			
X (area of field)	0.91	2.76	0.49
Y-intercept	778.00	3,026.12	1,735.30
R square	0.28	0.51	0.27
Number of samples	104	34	52

Source: Survey data by the authors.

Note: Average rent per one square meter was calculated in excluding data of fields whose rents were free.

a member of the wife's family.

As for the average rent per square meter, a considerable difference exists between “ordinary” types and the “banana” type<sup>(14)</sup>. The rent for an “ordinary” type of borrowed field of 1,000 m<sup>2</sup> is about 2,260 Rwandan Francs (Frw)<sup>(15)</sup>. In recent times, typical wages in rural Rwanda were 300 Frw per day; the rent of 0.1 ha corresponds approximately to the wages of hired labor during 1 week. This level of rent, therefore, is not particularly expensive. In comparison, the average rent for the “banana” type was much more expensive: a rental of 1,000 m<sup>2</sup> was calculated to cost approximately 4,830 Frw. Those who carried out the “banana” type of tenancy were relatively rich farmers<sup>(16)</sup>; their purpose for land borrowing was to harvest a great quantity of bananas in order to brew banana beer for sale. High rents for “banana” type sharecropping apparently result from its high profit rate. While the “ordinary” type of land borrowing tended to be carried out for the purpose of subsistence farming, the main objective of the “banana” type tended to be making a cash profit.

Regressions between rents and areas of fields confirmed the differences between rent levels, shown by their averages. In addition, they clarified new facts: while relationships between rents and areas of fields (indicated by the levels of R square) were ambiguous in the “ordinary” type of land tenancy, they were much clearer in the “banana” type, indicating that rent levels in the “banana” type tenancy were determined more rationally.

Using data from fieldwork, we examined the rent levels. Theoretically, the rent level of a field can be defined as the remainder of the total revenue generated from the field after the deduction of other production costs. The level of expected revenue is calculable from land productivity and the market prices of main crops. According to our calculations, expected revenue is estimated to be 15.0 Frw per square meter<sup>(17)</sup>. Taking into consideration the unreliability of Rwandan statistics,

as well as the considerable variation in production levels, which are influenced by numerous factors including climate, soil condition, and agricultural method, our estimates may not be accurate, and may require revision. Although possibly inaccurate, we used our estimates in order to calculate expected revenues and to compare actual levels of rents with theoretical levels. We will continue to discuss these issues.

In 2006, in order to examine the importance of rent as a factor influencing production costs, we carried out investigations concerning input for production. Table 6 shows the results of calculations from these data: production costs (labor cost, rent, and other input<sup>(18)</sup>), expected gross (and net) profits, and theoretical rent level are calculated per square meter.

Table 6 shows that actual rent levels were considerably lower than the theoretical ones. The theoretical rent levels, which are the remainder of expected revenues after the deduction of production costs with the exclusion of actual rents (or expected net income plus actual rents), considerably surpass the actual numbers by more than five times at Cell M and more than 13 times at Cell R. As a result, expected gross and net profits become very important. As the expected net profit can be interpreted as surplus in the case that all of the labor force was hired, its considerable amount means that it is more profitable to borrow lands and use hired labor to cultivate it than it is to loan lands for rent. In fact, some of the rich farmers of Cell M, such as M106, borrowed many fields, depending exclusively on hired labor to cultivate them.

It is of course not easy for the majority of farmers, who do not have enough money and lack the means to finance their lands, to acquire cash for rent. Moreover, the risk of agricultural instability is substantial. As irrigation is practically nonexistent in these two cells, lack of rainfall can directly ruin the harvests. As

**Table 6.** Production Cost, Expected Gross (net) Profit and Theoretical Level of Rent (Cell M & Cell R).

	Cell M		Cell R	
	fields of tenancy with fixed rent	fields of own property	fields of tenancy with fixed rent	fields of own property
Number of investigated fields	8	26	4	23
Average size of fields (m <sup>2</sup> )	1,155	3,879	1,906	8,462
Expected revenue (Frw/m <sup>2</sup> )	15.0	15.0	15.0	15.0
Production cost (Frw/m <sup>2</sup> )	6.9	6.5	5.3	5.3
Total labor cost (Frw/m <sup>2</sup> )	5.2	6.4	4.5	5.1
of which hired labor cost (Frw/m <sup>2</sup> )	2.8	2.8	0.0	3.3
Actual rent (Frw/m <sup>2</sup> )	1.7	0.0	0.8	0.0
Other inputs (Frw/m <sup>2</sup> )	0.0	0.1	0.0	0.2
Expected gross profit (Frw/m <sup>2</sup> )	10.4	12.0	14.2	11.5
Expected net profit (Frw/m <sup>2</sup> )	8.0	8.4	9.7	9.6
Theoretical level of rent (Frw/m <sup>2</sup> )	9.8		10.5	

Source: Survey data by the authors.

Note: Expected gross profit was calculated by deducing costs of hired labor, rent and other inputs from expected revenue. Expected net profit was calculated by deducing total production cost from expected revenue. Labor input for one day was considered as 300 Frw, as it was the average wage of a hired worker.

a result, farmers must always face risks that can deleteriously impact expected revenues, thus making the advance of rent very risky.

While reasons for “inexpensive” rents will be examined in detail in the next section, we would first like to point out a historical reason for this phenomenon. The characteristics of tenant contracts, stated above, should be considered in light of the continuity of traditional Rwandan land use.

In “traditional” Rwanda, up to the end of the colonial period, two systems of land use had coexisted. The first was the “*ubukonde*,” under which land was occupied and cultivated by lineages on the principle of “the first cultivators of the land have the right of occupation.” Should a stranger want to use a portion of the *ubukonde*, he or she had to be a client of the former occupants’ lineage, generally indicated and performed by giving some symbolic gifts such as sorghum beer and a pot of honey<sup>(19)</sup>. The second system was the “*isambu-igikingi*,” under which inhabitants were subject to the chiefs, or directly to the king, and were obligated to pay them tribute as well as serve as forced labor. *Isambu* referred to the land, the inhabitants of which had lost their autonomy and owed the obligation of tribute to authorities. As for inhabitants living in areas of *igikingi*, they had in principle to pay tribute directly to the holder of *igikingi*.

Generally, tribute amounts were insubstantial. According to Vidal (1974), who described the Rwandan rural economy in the 1910s, tribute paid to “a rich Hutu” was “about 30 kg of haricot and a big basket of sorghum’s ears.” She estimated the level of tribute to be 4 to 8% of the total yield. In the traditional context, the price of land use was asked with respect to the societal position of the client or subject, and in actual economic terms, was not very expensive. While land tenancy with fixed rents was a system that had already been recorded by the end of the colonial period, the level of rent was determined by converting tribute and forced labor into approximations of money (Reisdorff, 1952: 41–43). We can infer from these facts that one of the reasons for the “inexpensive” rents at Cells M and R can be explained by historical continuity, and because of this traditional context, it is determined on the basis of the value of symbolic gifts as well as tribute and forced labor.

## II. Actors and Their Social Relationships

Considering the cases of Cells M and R, three motivations, which are not mutually exclusive, can be discerned for land lenders: the first is an urgent necessity of money, the second is a lack of intention or capacity to use hired labor for the cultivation of owned lands, and the third is assistance to family members and friends.

As noted above, the average level of rent in these cells was not very expensive in comparison to the expected field revenues; economically speaking, it is more profitable to hire workers to cultivate a field than it is to lend it. Nevertheless, for Rwandan peasants, who generally lack cash and have very limited opportunities to finance their holdings, income from rent presents a precious opportunity to obtain cash. In fact, farmers who practiced the “banana” type rent at Cell M would explain to us that they had borrowed fields from “guys who needed

money.”

The case of M56, whom we mentioned above, serves as an appropriate example of the second motivation. For female household heads inheriting extensive lands, it was not easy to carry out a capitalistic way of agriculture: hiring workers, giving orders, and supervising them. These women did not choose a more economically rational mode of land use due to their personal intentions or limited capacity to select another system.

The third type was particularly evident at Cell R, where household heads often borrowed fields for free from the family members of their wives. As the Rwandan principle of inheritance is basically patrilineal, this meant that matrilineal family members, who would not therefore grant lands for reasons of inheritance, would lend them for free. This is interpreted as a sort of assistance, given by members who can afford to do so. We also observed cases of land lending for free between friends.

Motivations to borrow land can be distinguished into two types. The first is to supplement shortages of one's own property. This is the general motivation for the poor, and can be understood as an act of survival. The second type, which is exemplified by the rich, is to enlarge exploited lands in order to conduct capitalistic agriculture and increase profits. In other words, borrowed lands are used for security and insurance on the one hand, and for capital accumulation on the other hand. These two motivations, however, should be considered not as separate, but as a sequence of actions and circumstances.

Our analysis, combined with our observations since 1999, suggest that we should characterize social relationships between lenders and borrowers as temporary and *ad hoc* rather than stable client relationships; tenant contracts are temporary relationships that can be made when the interests of lenders and borrowers fit. Family members may lend fields for free to other family members, if they can afford to do so. This is, however, not always the case: if they can no longer afford to, they will cease to lend for free. For example, at Cell M, some amount of rent is requested even between family members<sup>(20)</sup>.

## LAND TENANCY IN THE WESTERN PROVINCE

### I. Sharecropping and Fixed Rents

Our research conducted in (then) Kibuye Province in 2005 showed that the sharecropping convention known as “*urutéerane*” was widely practiced in the region<sup>(21)</sup>. This was a relatively new phenomenon, as the inhabitants unanimously explained to us that it was after the civil war in the 1990s that the *urutéerane* came to be practiced in this area.

The practice of *urutéerane* is approximately as follows. At the beginning of the cultivating season, what is to be planted in the field is decided between a lender and a borrower. While one or at most two plants, such as haricot, soybean, and sweet potato, are planted, the provision of seeds is in principle shared by the two parties<sup>(22)</sup>. All of the labor including cultivation, planting, weeding, and

harvest should be provided by the borrower; the lender often works in harvesting for the purpose of counting the crop and bringing in half for him or herself. In addition, the proportion of sharing is always 50%, as observed during research. This kind of sharecropping is widely practiced in and around Cell S; of the 26 households that we canvassed in 2006, 11 households practiced it on 19 fields. Among these, one household (S31) practiced the *urutéerane* as lender and borrower at the same time; this old widow borrowed a field to practice sharecropping, while simultaneously lending one of her fields to a young man in a practice of *urutéerane*.

The *urutéerane* does not have a good reputation. People generally complained that this was a bad institution exploiting borrowers, and that the poor without enough lands were involved in it under duress. While the opinion that this phenomenon appeared after the civil war was unanimous, the explanation of its origin was various and ambiguous. Some explained that Tutsi survivors, who survived the genocide and inherited a lot of lands (such as M56), began the *urutéerane* in order to use inherited lands effectively; another commented that women invented it who were angry with their husbands for wasting income from rent by drinking too much beer. In the case of *urutéerane*, women were more secure than before, as the rents were paid in nature. When we asked people whether they preferred tenancy with fixed rents or sharecropping, they answered unanimously that the former was preferable to the latter. However, they added at the same time that it was getting harder to find a lender who accepted tenancies with fixed rents; lenders tended to impose sharecropping practices unless they were members of the same family. Actually, in cases of sharecropping at Cell S, none of the lenders were family members.

The origin of the *urutéerane* is difficult to pinpoint. We believe that examining the backgrounds and conditions for the emergence of sharecropping are more important than investigating the “true” origin of the institution. For this purpose, we examined situations of land and labor at Cell S using the same methods as those used for the two other research sites. During the period of field research in 2006, both land borrowing with fixed rents and sharecropping were practiced at Cell S. The former type of land tenancy was carried out by 19 households in 31 fields, data of which is shown in Table 7<sup>(23)</sup>. When compared to Table 5, this table sheds light on the characteristics of land tenancy at Cell S.

Fields borrowed for free were difficult to find at Cell S, and we were able to find only one case. At Cell S, the average rent per square meter was much more expensive than in other areas, being about five times and eight times, respectively, higher than for the “ordinary” type of land tenancy at Cells M and R. Considering that the average annual inflation rate from 2003 to 2005 was 9.2% (International Monetary Fund, 2006), the difference between rent levels cannot be attributed simply to inflation. The expensive rent levels at Cell S can be confirmed from our results of regression, which reveals the third characteristic of land tenancy at Cell S: the coefficient of determination is higher than that for the “banana” type of land tenancy. The close relationship between rent and area can be understood as the rent level is determined in an economically rational way; in other words, the market mechanism was working in the determination of rent level.



**Table 7.** Borrowed Fields and Rent Level (Cell S).

	Cell S "ordinary"
Number of total investigated fields in tenancy	31
Average area (m <sup>2</sup> )	372
Number of fields : rent=0	1
(%)	3%
Number of fields : rent>0	30
(%)	97%
Average rent per one square meter (Frw)	11.22
Regression between rent and area of field	
Y (rent)	
X (area of field)	10.62
Y-intercept	139.95
R square	0.73
Number of samples	25

Source: Survey data by the authors.

Note: Average rent per one square meter was calculated in excluding data of fields whose rents were free.

**Table 8.** Production Cost, Expected Gross (net) Profit and Theoretical Level of Rent (Cell S).

	Fields of tenancy with fixed rent	Fields of own property	Fields under sharecropping average
Number of investigated fields	27	29	18
Average size of fields (m <sup>2</sup> )	403	2,912	608
Expected revenue (Frw/m <sup>2</sup> )	15.0	15.0	15.0
Production cost (Frw/m <sup>2</sup> )	26.0	6.5	22.0
Total labor cost (Frw/m <sup>2</sup> )	18.7	6.2	14.6
of which hired labor cost (Frw/m <sup>2</sup> )	8.9	1.9	2.9
Actual rent (Frw/m <sup>2</sup> )	5.6	0.0	7.5
Other inputs (Frw/m <sup>2</sup> )	1.7	0.3	0.0
Expected gross profit (Frw/m <sup>2</sup> )	-1.3	12.7	4.6
Expected net profit (Frw/m <sup>2</sup> )	-11.1	8.5	-7.1
Theoretical level of rent (Frw/m <sup>2</sup> )	-5.5		0.4

Source: Survey data by the authors.

Note: The rent of sharecropping was supposed to be 50%, as the half of harvest belongs to land-owners.

Table 8 shows production costs, expected gross and net profits, and theoretical levels of rent for different types of fields calculated by the same method used in Table 6. However, in contrast to Table 6, actual rents considerably exceed theoretical ones, as shown in Table 8. Although the expected gross and net profits in fields of one's own property are as high as those for fields of Cells M and R, they are much lower for those with tenancy and fixed rents and under sharecropping. Indeed, for the former, the expected gross profit was actually negative.

We should not, however, totally accept the figures shown in Table 8. As it is unlikely that farmers cultivate when the expected gross profit is negative, we can

infer that the data or way of estimation may have some problems. Three possibilities exist: revenue ratio per land (15.0 Frw), with which we calculated the expected revenue, is too low; farmers systematically underestimated areas of borrowed lands and sharecropping lands; and farmers systematically overestimated labor inputs. Among these, the first reason is especially important. First of all, Rwandan agricultural statistics are not very reliable. Moreover, we can estimate from the fact that farmers unanimously prefer tenancy with fixed rents to sharecropping that the expected revenue should be considerable<sup>(24)</sup>. The second reason seems unlikely because no clear reason exists for farmers to systematically underestimate their fields, as people in this region were very conscious of their land areas, and we could find no particular reasons motivating them to lie (for example, they are not required to pay land tax). Nevertheless, we cannot exclude the possibility of underestimation, as we did not measure the fields ourselves (see NOTE 23). The third reason is also unlikely, as we could not find any reason for farmers to systematically overestimate their labor inputs.

Although we have some reservations about the figures shown in Table 8, this does not mean that the figures are meaningless. It is highly likely that gross revenues per square meter of fixed rent fields and sharecropping fields at Cell S are actually high, as we later explain. Moreover, we cannot consider that this high gross revenue per area was caused only by the difference between crops planted<sup>(25)</sup>. In order to explain this point, it is necessary to take the increased demand for lands and agricultural productivity into account. According to Table 8, the average areas of fields with fixed rent and under sharecropping are very small, while the labor costs in such fields are significantly high. Although we cannot sufficiently explain the strikingly high labor costs in this paper, it is safe to assume that highly intensive cultivation is carried out in the fields with fixed rents and under sharecropping at Cell S<sup>(26)</sup>. Even if the areas of these fields were underestimated, this would not completely explain the high labor costs, as shown in Table 8.

In summation, it is possible to assert from comparing the data in Tables 7 and 8 that the rent levels at Cell S are much higher than those at Cells M and R, and that using hired labor to cultivate borrowed lands is not profitable at the former, although it is at the latter sites.

Why did sharecropping emerge and rents soar at Cell S, while the same phenomenon did not occur at Cells M and R? Although population growth was an important background for this phenomenon, this explanation is not sufficient; the population density at Cell M seemed to be similar to that at Cell S<sup>(27)</sup>, although levels of fixed rent at the former site were, at least for "ordinary" rent, much less significant than those at the latter. The low population density could explain low rent levels at Cell R, but not at Cell M.

## II. Comparing Cell M with Cell S

Two factors seem to be important in explaining differences between Cells M and S. The first is the spread of cash earning activities among farmers; while cash earning activities tended to be monopolized by a few rich farmers at Cell

**Table 9.** Comparison of Cash Earning Activities.

(unit: number of households, Rwandan Francs)

	Number of researched households	Coffee cultivation	Average amount of sales (coffee, Frw)	Vegetable cultivation	Sales of banana products	Average amount of sales (banana, Frw)	Commercial activities
Cell M	25	5	15,600	0	13	21,920	3
Cell R	26	1	20,000	0	8	13,708	3
Cell S	26	17	37,450	6	22	20,538	5

Source: Survey data by the authors.

M, they were actively and widely practiced by ordinary farmers at Cell S. Table 9 compares several cash earning activities at the three cells: coffee cultivation; vegetable cultivation, including tomato and onion growing; sales of banana products, including banana beer and clusters of the fruit; and commercial activities.

Table 9 shows that cash crop production was widely practiced at Cell S. As noted above, Lake Kivu's shore region is one of the most important coffee production regions in Rwanda. While the majority of households researched at Cell S produced coffee, this activity was less important at Cells M and R. In addition to coffee, vegetable production for sale to city dwellers was also active at Cell S, where some farmers even borrowed ships to transport their tomatoes to Gisenyi, a big town situated at the north of the lake. Interestingly, vegetables tended to be cultivated in fields of tenancy with fixed rents<sup>(28)</sup>. As for sales of banana, more inhabitants of Cell S engaged in this activity than those living at the other cells. Although the estimated average amount of banana sales per household was almost the same between Cell S and Cell M, sales at the latter site were mainly carried out by two households who borrowed lands with "banana" rents. Such concentrated activity was not observed at Cell S.

Commercial activities were also different between the two cells. During research, we observed such commercial activities as running retail stores, carrying out transactions of agricultural products as well as cattle, and distributing beverages for profit<sup>(29)</sup>. Managing retail stores usually encompassed activities relating to buying such sundry goods as salt, sugar, soap, matches, and juice in town and selling them in rural area; often, alcohol such as banana and sorghum beer was also sold. Transactions of agricultural products involved stocking a large quantity of products such as sorghum and haricot just after their harvest, and selling them during the off-season when their prices would rise. Although ordinary farmers were able to practice this activity on a small scale, a large amount of money is required to buy stock in large quantities. Transactions involving cattle also require a great deal of money as working capital. While all of the five households practicing commercial activities at Cell S managed retail stores, at Cell M, two households carried out transactions of agricultural products and cattle while only one managed a retail store.

Our data therefore shows that at Cell S, farmers actively carried out cash crop production, and commercial activities were limited to retail stores, in which

participation and management were relatively easy for ordinary farmers. However, at Cell M, cash crop production was generally inactive and mainly conducted by a few rich farmers, who also monopolized commercial activities, which required significant amounts of money<sup>(30)</sup>. From the above arguments, we can infer that the income gap among inhabitants is wider at Cell M than at Cell S; a lot of farmers could earn money from cash crop production at the latter site, while at the former, cash earning activities were the province of a few rich farmers, who could afford to pay “banana” rent and engage in transactions of agricultural products and cattle.

These points are also supported by Gini coefficients, shown in Table 3, and by the differences in land acquisition, shown in Figs. 2 and 4. Gini coefficients of Cell M, whether of managed lands or of owned lands, are larger than those of Cell S. While the composition of managed lands is clearly different at Cell M, as large landholders accumulated lands by purchase and borrowing, such clear differences in farm size were not observed at Cell S.

The second important difference between Cell M and Cell S is the mode of labor procurement. At Cell M, labor forces are basically composed of nuclear family members or hired workers<sup>(31)</sup>. While members of the nuclear family can supply free labor, hiring wageworkers requires 300 Frw per day. At Cell S, however, farmers have a third way of labor procurement, called *kuguzanya*<sup>(32)</sup>. This is a free labor exchange system between individuals. Table 10 shows the composition of labor inputs at the three canvassed cells. While the proportion of the *kuguzanya* attained 6% at Cell S, it was not observed at Cell M.

Although *kuguzanya* has been a traditional custom of labor procurement, typical throughout Rwanda, it has gradually been replaced by hired labor. In the regions where it remains, it is used mostly by the poor. An important reason for this is that *kuguzanya* requires intimate social relationships and takes time to negotiate; it is necessary, in order to ask for *kuguzanya*, to visit neighbors and arrange times to work. Furthermore, once a person asks for this help, he or she is expected to someday reciprocate, by performing the same work. For many inhabitants, especially for those who have enough cash to hire workers, negotiating for *kuguzanya* is too time-consuming and tiresome; moreover, they tend to resent the constraining obligation of returning the favor. When we asked farmers who did not use *kuguzanya* for their reasons, they unanimously replied, “I am too busy” or “I do not have time.”

Table 11 shows the composition of labor input by types of land use. It is clear from the table that *kuguzanya* had mainly been used by sharecroppers. Considering that sharecroppers were relatively poor, this labor exchange system enabled those

**Table 10.** Average Composition of Labor Inputs.

	Number of fields	Family labor	Hired labor	<i>kuguzanya</i>	Total
Cell M	34	56%	44%	0%	100%
Cell R	27	35%	63%	2%	100%
Cell S	74	61%	33%	6%	100%

Source: Survey data by the authors.

Note: In order to establish the Table, one day work was calculated as 300 Frw.

**Table 11.** Average Composition of Labor Input by Types of Fields (Cell S).

	Number of fields	Family labor	Hired labor	<i>kuguzanya</i>	Total
Fields of tenancy with fixed rent	29	65%	31%	4%	100%
Fields of own property	27	46%	48%	6%	100%
Fields under sharecropping	18	66%	20%	14%	100%

Source: Survey data by the authors.

who did not have enough money to hire workers to mobilize a labor force greater than the nuclear family. By using *kuguzanya*, farmers were able to recruit labor forces beyond the capacity of their families, without having to hire labor.

The above discussion enables clarification of two particular characteristics at Cell S, in comparison to Cell M: first, many inhabitants engaged in cash earning activities, and second, even the poor had the capacity to procure a much greater labor force than that provided by their closest family members. Relating these characteristics to the high levels of fixed rents and the emergence of sharecropping, the following scenario seems to be likely.

Rising demand for land was a crucial background of the particular phenomenon at Cell S, which included the soaring rent level and the emergence of sharecropping. Although it is true that the rapid population increase was an important reason for rising land demand, certain characteristics of economic activities can also help to explain the situation. At Cell S, the income gap among inhabitants was relatively small and many inhabitants earned money through the production of cash crops such as coffee and vegetables. These points are especially important in explaining rising demand for land. In addition, even those who could not afford to hire workers because of the lack of money could mobilize labor forces for free due to *kuguzanya*<sup>(33)</sup>. In this kind of situation in which many inhabitants had opportunities to earn money by using their land, it appears obvious that the demand for land would rise considerably, thus giving rise to an increase in fixed rent levels and the emergence of sharecropping.

Room for further discussion exists to explain the introduction of sharecropping at Cell S. As some people explained, it could be an invention of the Tutsi who had inherited vast lands, or that of women angered by the behavior of their husbands. Although an accidental incident might have been a direct trigger, the background of the introduction and diffusion of sharecropping should be understood as explained above. To reiterate, the practice of sharecropping, which involves more risk-sharing than incurred by fixed rent, seemed to be introduced under the conditions in which high demand for land had markedly raised the fixed rents of land tenancy, thus making it too risky for the majority of peasants. In other words, although the rent level rose at Cell S as a reflection of an increase in agricultural productivity, it made land borrowing much riskier for farmers, as bad harvests could result any time rainfall was insufficient.

At Cell M, in contrast, cash earning activities were mainly conducted by a few rich farmers, who were engaged in substantial commercial activities and borrowed lands to cultivate using hired workers. Borrowing fields with “banana” rent was their typical activity for accumulating capital. In contrast, the majority of

inhabitants, lacking enough cash to borrow lands, tended to cultivate their own lands with nuclear family members. Enlarging lands by borrowing was not easy for them; in addition to the obligation of preparing cash for rent, they had to bear the risk of bad harvests. In this situation, they tended to prefer working as hired labor to obtain money for daily subsistence rather than borrow fields for cultivation.

It is important to point out that the cost of land borrowing also increases for rich farmers. Although we explained that rich farmers had accumulated lands by borrowing and purchasing, it is unlikely that they would continue to accumulate lands to become capitalist managers of agriculture. The reasons are both economic and sociological. The enlargement of farm size causes problems, as landowners tend to use borrowed lands and hired labor in their management. In addition to the fact that the surveillance costs for hired workers considerably rises as farm size grows<sup>(34)</sup>, landowners have to accept all of the many risks affecting cultivation under the contract of land tenancy with fixed rents. The sociological reason relates to the social perception of land in rural Rwanda, where extended families retain land rights (although not as strongly as those in other African countries), and modern property rights are inchoate. In such a situation, the act of buying and accumulating lands in rural society is socially constrained; land accumulators would be annoyed by various conflicts with neighbors, including a fear of witchcraft. It is therefore rational for rich farmers not to seek enlarging their lands for agriculture, but to turn instead to commercial activities that do not depend on land. This incentive must be particularly strong at Cell M, which is in close proximity to a town.

In summation, we can conclude that the historical context influenced the rise of rents at Cell M because using land for economic activities is socially and economically constrained not only for the poor majority, but also for the rich minority. The latter's strong demand for the land is, however, revealed by the high level of the "banana" type rent.

## CONCLUSION

Previous studies have already pointed out that Rwanda is one of the most densely populated countries in Africa and that land transactions are commonly practiced there. This paper clarified Rwanda's landholding systems with special reference to land tenancy, and discussed the socioeconomic backgrounds of different kinds of tenant contracts based on case studies at three research sites. Finally, we will summarize the facts on which this paper has shed light, and examine the variety of Rwandan tenant contracts.

In rural Rwanda, borrowing is an important kind of land acquisition; borrowed lands composed about 20% of the total lands in use at our research sites. Two types of tenant contracts exist: borrowing with fixed rents, and sharecropping. While the former is more typical, the latter has emerged recently in a particular area. At Cells M and R, the levels of fixed rent were low in comparison to expected revenue from the borrowed fields. This low level of rent should be

understood in respect of the continuity of land tenure systems that had been practiced until the end of the colonial period, namely, *ubukonde* and *igikingi*. Under both of these systems, the price of land use was relatively inexpensive: in the traditional context, it was rather sociopolitical connections, i.e. being a client or a subject of a landholder, that were required. At the end of the colonial period, the system of *igikingi* and the clientship supported by the system were dismantled as a consequence of the “Social Revolution.” After independence, while land tenancy lost its previous clientalistic character, instead becoming temporary and *ad hoc*, the rent levels generally increased over previous levels, which had been symbolic and inexpensive<sup>(35)</sup>. We can understand that rent levels at these cells are constrained by a historical context, even today.

More than 40 years have passed since independence. It seems natural that the characteristics of land tenancy systems have transformed in ways corresponding to the particular conditions of each region. In this context, the system of tenant contracts at Cell R, in which the population density was the lowest of the three cells, seems to be the most similar to the original system just after independence, although the particularity of land division between Old Case returnees and New Case returnees should be taken into account. Not only were rent levels low, fields were often loaned out for free. At Cell M, while population density has increased considerably, cash earning opportunities were unequal among inhabitants. In this cell, rent levels had recently risen, and borrowing fields with no rent became increasingly difficult. However, fixed rent being the only form of tenant contract, rent levels were still relatively low in comparison with expected revenues. Demand for land was relatively weak for the following reasons: cash crop production was not highly developed, poor farmers could not afford to borrow fields, and rich farmers preferred commercial activities to agriculture.

At Cell S, the situation was clearly different; not only had the practice of sharecropping emerged in recent years, tenants’ rents had soared compared to those in other areas. As rent levels came to be determined through a market mechanism, the logic of determining rent levels has changed; in other words, continuity with the pre-independent period has already been lost. Apart from the population increase, two factors were important for this change: the development of cash earning activities, especially cash crop production, and the existence of a traditional labor exchange system (*kuguzanya*). While the incomes from the production of cash crops such as coffee and vegetables enabled many farmers to invest in land through purchase or borrowing or to hire workers, *kuguzanya* enabled the poor to mobilize a labor force greater than that composed of their nuclear family members. We can therefore point out three factors behind the recent emergence of sharecropping at a coffee production area in western Rwanda: population increase, development of cash earning activities, and a traditional labor exchange system.

Although inhabitants of Cell S consider sharecropping to be disreputable, we should note that the system was introduced in areas where agricultural productivity was high and an institution for labor mobilization had developed. It is therefore too simplistic to interpret the emergence of sharecropping merely as a means of further exploiting farmers; we must also recognize that the system was facilitated

by regional agricultural development.

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#### NOTES

- (1) Although an agricultural survey was conducted by the Ministry of Agriculture and data concerning areas of owned and borrowed land were recorded by the Republic of Rwanda (2000), the figures are not reliable. According to the statistics, borrowed lands are supposed to be in the range of 0 to 6% of all managed land. The figures are doubtful, in comparison with Blarel (1994: 77) and our research data.
- (2) We did not use a strict method of random sampling to choose households for research. Selecting a former sector in southern and eastern Rwanda, and considering that canvassed households should be scattered in cells that were included in the sector, about 20 households whose heads had agreed to let us measure their land were chosen. For research methods, see also Takeuchi & Marara (2005). We adopted this method mainly because of the difficulty in selecting an appropriate research site, as settlements are generally scattered in rural Rwanda. With a population of more than 1,000, a former cell was too large to conduct a survey of all inhabitants, and too small to concentrate all our resources into its research. In addition, considering the administrative infrastructure and our budget constraints, conducting a random sampling method seemed to be unrealistic.
- (3) Although we ceased research concerning land use in the fifth year of our study (2003), investigating other topics such as life history and labor use continued up to 2006.
- (4) In fact, the registration of privately owned land is stipulated as an obligation (article 30) in the new land act adopted on July 14, 2005.
- (5) Interview at the OCIR-CAFE on July 3, 2006.
- (6) “*Igikingi*” was a land for pasture, which the Rwandan king donated to his important subjects. See Nkurikiyimfura (1994).
- (7) As explained, we did not carry out the method of random sampling to select households for research. In addition, data for Cell M and Cell R in Table 3 include the political leaders of the sectors (Responsables and Conseillers). As political leaders in rural Rwanda tend to be rich, the landholdings according to these data are likely to be larger than reality. While admitting the bias of the data, we will reflect on what can be argued.
- (8) For the results among households that have been canvassed since 1999, see Takeuchi & Marara (2005: 170). The Gini coefficients of managed lands and owned lands among 21 households at Cell M were 0.45–0.50 and 0.56–0.60, respectively, during the period from 1999 to 2003.
- (9) In this paper, the “family” refers to the group members, generally with two to four generations, derived from a single ancestor. The word includes relatives.
- (10) Among 26 households at Cell S, 15 received such donation of lands.
- (11) While the custom of giving a cow on festive occasions can be observed throughout Rwanda, that of giving lands seems to be rare. Although we do not know exactly why such a custom was adopted in this region, we observed two notable characteristics of this practice: one is a popular perception that a field is considered to be as precious as a cow,



- and the other is a social condition that enabled the gift; i.e., as they could give land to a friend (nonfamily member) as a gift, this means that the regulation of the community (or lineage) on land was not very strong in that society. This characteristic may relate to the fact that the majority of the ancestors of actual inhabitants gained the land from a subchief during the late colonial period. In such a case, it was likely that settlement was carried out not by a lineage but by a nuclear family, and that after the “Social Revolution” and independence, individual land rights strengthened considerably.
- (12) Examples of a rich appearance are as follows: a house equipped with windowpanes and grilles, a house whose floor is cleanly concreted, beds covered by new mosquito nets, and the presence of several electrical appliances.
  - (13) We should note that this situation may now be rapidly changing. When we carried out research in 2006 in Cell M, several canvassed households stated that it had become impossible to find a field to borrow free of charge.
  - (14) The average annual inflation rate calculated by the consumer price index between 2000 and 2003 was 4.2% (International Monetary Fund, 2006). We can therefore consider that it did not strongly influence rent levels.
  - (15) At the end of 2003, US\$1 was 571.39 Frw (International Monetary Fund, 2006).
  - (16) The fact is shown in Fig. 2, in which the proportion of borrowed lands is important in the land acquisition of the upper quarter group.
  - (17) The method of calculation was as follows: first, by calculating the land productivity of main crops in season A (from October of the previous year to March) of 1999 and 2000 by using data from the Republic of Rwanda (2001), and next, by multiplying the 2 years’ average rate of land productivity with the 2 years’ average market prices of main crops, thus calculating expected revenue. The average of these 2 years can be considered to be close to the average crop, as their harvests were evaluated as very good (year 2000, season A) and below average (year 2001, season A) (*Economist Intelligence Unit*: August 2000, February 2001). In order to calculate the average revenue per unit of land, we assumed that farmers planted four main crops (banana, sorghum, haricot, and sweet potato) in every field, in the same proportion. Although data on the provincial level were available from the Republic of Rwanda (2001), we used national-level data because of issues of credibility. The reason that the calculation was carried out for season A was to make the estimation consistent with our research data on input for production, which was carried out in season A of 2006.
  - (18) Hired labor costs were calculated and shown separately from the total labor cost. The cost of other inputs includes those of agrichemicals and chemical fertilizers. Capital interests and depreciations were not calculated because fixed capitals are generally rare in Rwandan agriculture.
  - (19) For more concerning the traditional land tenure system in Rwanda, see Adriaenssens (1962) and Reisdorff (1952).
  - (20) It is impossible at this stage to judge whether the social relationship between lenders and borrowers of land, which we discussed here, may be the same at Cell S; because as we discuss later, the rent levels there were much higher, and the increase of rent may alter social relationships. We would like to continue to research this point in the future.
  - (21) “*Urutéerane*” is a noun derived from a verb “*gutéera*,” which means “to gather,” “to meet,” and “to mix.”
  - (22) We did, however, observe several cases in which borrowers prepared all of the seeds of sweet potato in *urutéerane*. The borrowers explained that the reason for this was that sweet potato seeds were cheap. Strictly speaking, we should understand that who prepares seeds in *urutéerane* is one of the conditions to be determined in negotiations between the two parties.

- (23) We did not measure fields under borrowing and sharecropping at Cell S. In this area, people explain areas of fields using the indigenous unit “*akajagali*,” which signifies about 1 are. Such a unit does not exist at our other research sites. The indigenous unit and inhabitants’ perception of the area of their fields are accurate.
- (24) Comparing the regression equation of the rent ( $y=10.62x+139.95$ ) and that of the level of sharecropping ( $y=ax/2$ ,  $a$ =expected revenue per square meter in A season), we know that farmers have an advantage in using fixed rents over sharecropping only when  $a > 21.24$ . Considering that farmers at Cell S unanimously preferred the former to the latter, it is highly likely that they perceived a higher expected revenue than 21.24; in any case, the figure is much higher than 15.0.
- (25) Among 31 borrowed fields with fixed rents at Cell S, cash crops such as tomato, sugarcane, and banana were planted in five fields; in the remaining 26 fields, farmers cultivated ordinary food crops such as haricot, sweet potato, and sorghum. As for the 18 fields under *urutéerane*, ordinary food crops were planted in all fields except one (tomato). Although the cultivation of cash crops was often practiced on borrowed lands with fixed rents, these did not comprise the majority of the fields. Therefore, cash crop production certainly contributed to the increase in expected revenues, but it was not the only cause. It means that we should seek other reasons for the possibly high gross revenue, besides the difference in crops.
- (26) According to Byiringiro & Reardon (1996), Rwandan farmers tend to supply considerable labor input into lands in order to raise their productivity, and the smaller the field, the higher its labor intensiveness. Table 8 shows that the average sizes of fields with fixed rents and under sharecropping were small in comparison with other types of fields.
- (27) As Table 1 shows, the population density of the Province of Butare, which included Cell M, is higher than that of the Province of Kibuye, which included the territory of Cell S. Although the population numbers for each of the new cells are not yet available, that of the sector covering almost the same territory of Cell M was 4,902 inhabitants, and that covering almost the entire territory of Cell S was 4,887 people (République Rwandaise, 2003b). It is not likely that a big difference in population density occurred between Cells M and S.
- (28) In 2006, six households at Cell S cultivated vegetables in seven fields, of which three fields (of three households) were borrowed with fixed rents, one field (of one household) was under sharecropping, and three fields (of two households) were the cultivators’ own properties. While vegetable production demands inputs of fertilizer and agrichemicals such as insecticides, such inputs are rarely utilized for food crops. As Table 8 shows, the “other inputs” is important in tenancy with fixed rents at Cell S in comparison with other types of fields, signifying that vegetables were produced there. Vegetable production was generally practiced during the dry season in fields made in swamps; farmers could use the swamp water, and a stable yield and benefit could be expected if necessary inputs were assured. In this case as well, the expected revenue per square meter was sure to be much more than 15.0 Frw.
- (29) Distribution of beverages was observed only at Cell R. This activity requires a great amount of money in order to buy and stock cases of beverages such as Coke, Fanta, and industrial beers. This can be considered an exceptional case.
- (30) The different features of commercial activities at these two cells could be partly explained by the distance from a town; at Cell M, which is near Butare, inhabitants do not have to depend on retail stores, as they can easily visit the town to buy sundry goods. The reason why vegetable production was inactive at Cell M should be explained by factors other than distance because the nearness to a town can be considered as advantageous for vegetable producers. We do not yet have persuasive explanations on this point.

- (31) The extent of familial relationships, within which people can ask to work for free, is not fixed but rather moves on a case-by-case basis. We here distinguished two ways of labor procurement. Important here is whether the labor force can be mobilized for free or not. We used the word “nuclear family members” here, as the definition of “family” is broad in this paper (see NOTE 9), and members of a nuclear family are at least available to work for free.
- (32) *Kuguzanya* is a verb that means “to help each other.”
- (33) Although the influence of *kuguzanya* on rising demand for land might be small in comparison with active cash earning activities, we think that it should not be underestimated; as the landholdings at Cell S were not as considerably differentiated as at Cell M, the relatively poor people at the former site seemed to have many more opportunities to use hired workers than those in the latter. It is therefore probable that the existence of the *kuguzanya*, which enabled farmers to mobilize greater labor force, could give them the initiative to borrow lands.
- (34) In rural Rwanda, employers usually work alongside their hired workers, as they think that hired workers idle if they are not closely supervised. As the number of available family members is limited, the larger the exploited lands and the greater the number of workers, the more difficult it is to effectively conduct surveillance.
- (35) *Ubukonde* formally remained after independence because the region where *ubukonde* was prominent was one of the power bases of the dominant political elite after independence. We do not, for the moment, have information about social changes of the *ubukonde* region. It is nevertheless certain that this region was limited to the northwestern part of the country.

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**Photo 5-1:** Landscape of Cell S and Lake Kivu (Oct.2005).



**Photo 5-2:** Landscape of Cell S (Jun.2006).



**Photo 5-3:** Two hills and a swamp inbetween in Cell M (Oct.2005).



**Photo 5-4:** Landscape of Cell M (Oct.2004).



**Photo 5-5:** Landscape of Cell R (Jul.2006).



**Photo 5-6:** Landscape of Cell R (Jul.2006).