

## **LAND TENURE SYSTEMS AND RENTAL DETERMINATION IN A SUBURBAN VILLAGE IN HANOI, VIETNAM**

**Phan Vu Quynh Chi and Akimi Fujimoto**

Tokyo University of Agriculture

(Received: June 15, 2010; Accepted: April 20, 2011)

### **ABSTRACT**

The long term development of Vietnamese agriculture depends on the efficient and effective use of land. In Vietnam, farmlands operated formerly by communes were redistributed among their members in the 1980s under Doimoi Policy. Land and related policies have direct effects on the livelihood of rural populations through influences on land tenure, farm size, fragmentation of land holdings, land use, and land credit markets. The average farm size in Red River Delta ranges from 0.2 ha to 0.3 ha per household and the plots of cultivated land are scattered over an average of 6 places. For the near future, food crops and rice are still the dominant crops but changes in land use are undoubtedly occurring. Low profitability cash crops have been abandoned in favor of crops offering higher returns such as horticultural crops. This paper aims to clarify the current land tenure systems, including the pattern of land holding and the existing tenancy contracts of the farm households, and to investigate the recent changes in land use systems for agricultural production. Data were collected by a questionnaire survey, conducted in February 2008 in Da Ton Commune, Gia Lam District, Hanoi. It was found that about 75% of households had farm land area of under 0.36 ha, and the total number of land plots of the 35 households investigated was 204, of which 70% were smaller than 0.09 ha in size. This commune experienced drastic changes in land use patterns and recently there emerged tenancy contracts. More than 70% of contracts were for fruit land. It was considered that tenancy contracts were influenced not only by economic factors but also by social factors.

**Key words:** agriculture land use, tenancy contract, rent function, fragmentation

### **INTRODUCTION**

Agricultural development, through land reform, technological innovation and market development, has been recognized as important in the developing countries. Agricultural production in tropical countries like Vietnam basically depends on the use of endowed fertile land resources. Even though land is physically a limited resource, its productivity can be increased through various technological innovations.

With some 70 percent of the population still living in rural areas, the issues of land consolidation, flexibility of land use, the role of technical change and the impacts of policies related to taxes and credit are all important. Land fragmentation, in which a farm household operates more than two separate blocks of land, is a significant issue in Vietnamese agriculture, especially in North Vietnam. In Vietnam, there are about 75 million blocks of land (Sally et al, 2006), with an average of seven to eight blocks per farm household. Such fragmentation can be seen to have both negative and positive aspects for farm households and the community generally. Farmers conducted the transactions of farmland for the needs of the family, for land accumulation, and for expansion of agricultural production. The standard farmland area ranges between 0.1-0.15ha per adult and

0.08-0.1ha per child under 16 years old and elder over 60 years old (Vo, 2001). The average farm size in Red River Delta ranges from 0.2 ha to 0.3 ha per household and the blocks of cultivated land are scattered over many places, resulting in difficulties in farm management (Nguyen, 2003). Therefore, these small blocks should be consolidated into one or two larger blocks. Farmers do not sell land and land lease is generally conducted under rental contract management. For farmers who intend to expand their farm size, it is necessary to acquire other farmlands through tenancy.

Moreover, with high economic and population growth, the dietary patterns in the developing countries are rapidly changing. In villages located near growth centers, land and labor have been subjected to competition from the non-agricultural sectors, while villages relatively far from the centers have shown agricultural diversification in response to expanding market demands. Demand for food is diversifying in favor of animal products, fruit and vegetables (World Bank, 2005). The farmers have shown a clear trend that while maintaining or reducing rice cultivation, they have increased planting of horticultural crops such as fruit and vegetable. These complex problems require better understanding of the present status and recent changes of land tenure.

Based on the data collected from surveys, this paper aims to clarify the current land tenure systems, including the pattern of land holding and the existing tenancy contracts of the farm respondents, and to investigate the recent changes in the land use system for agricultural production. A questionnaire survey was conducted in February 2008 in Da Ton commune, covering a total of 35 farmers with a population of 163 people. Since land is one of the major factors of production in agriculture, the institution of land tenure affects the organization and probably the efficiency of farm production. In this study area, not only small farm size but also fragmented plots were the main characteristics of land resources.

## **ECONOMICS OF LAND TENURE AND LAND RENT**

### **Land tenure**

There are different systems of land tenure in developing countries but in any particular country or region one system is typically common. Tenancy contracts and ownership (private, community public) have their relative merits under particular conditions. Land tenure systems affect farm management efficiency in terms of resource allocation and productivity. The efficiency of resource allocation considered here is the efficiency of combination of production factors valued in monetary terms, relative to the income produced by them. To attain optimum allocation of resources within the farm, resources must be so employed that the value of the marginal product is equal to the marginal cost of the factor, and the marginal cost of the factor must be equal to its price (Johnson, 1950). Traditionally, research into the tenurial effects on resource allocation has taken the form of a comparison of the performance among owner operation, fixed-rent tenancy and share tenancy. Fixed-rent tenancy is regarded as having the same effect as owner operation on resource allocation because rent under this tenancy form is fixed at a certain level and therefore is regarded as a fixed cost which does not affect the marginal cost of production at all. The share tenant must pay a fixed proportion of the produce as his rent and thus forces the marginal value product curve to be lower than that of owner operation and fixed-rent tenancy.

### **Land rent**

“Rent” refers to contract rent or the actual payment tenants make for the use of land owned by others. The classical theory of rent considered this as a surplus or a consequence of the differences in the costs of production on farms. It was considered that the poorest quality land produced a zero rent, since its output was exhausted by the cost of production, while more fertile land produced rent as a residual surplus of the output less the cost of production (Ricardo, 1911).

Modern economic analysis advanced by the concept of marginal product brought the theory of rent into a new dimension. Clark and Haswell (1970) indicated three factors as determinants of rent in subsistence agriculture. The most important of these is the marginal productivity of land. The others are population density and non monetary value of land ownership. Now, the general trend is to regard rent as determined mainly by the marginal productivity of land. Rent is equal to the marginal productivity of land in equilibrium and the rental level will be equal to the value of the marginal product of land in a competitive market. There have been some cases where the rental levels are often far below the marginal products of land. This difference was due to two points: the existence of side contract payments such as free labor and the poor quality of rented land whose average productivity was lower than owner operated land. There exists a considerable variation in the actual rental levels among fixed- rent tenancy agreements even in the same village because the rental variation seems to be the practice of mutual aid between kin-based relatives in landlord- tenant relations.

## **LAND TENURE AND LAND USE SYSTEMS IN VIETNAM**

### **Land policies in Vietnam**

The Socialist Republic of Vietnam has a total land area of 331,000 km<sup>2</sup>, of which approximately 22% is used for agricultural purposes with about 100 million land parcels (World Bank, 2005) in the whole country. Before independence in 1945, agricultural land was divided into two categories: communal and private land. There were two main classes concerning the ownership of land in the rural area: landlords and tenants. The landlord class accounted for only two percent of the whole population but occupied more than half of the total land area, while 59% of farm households were landless and so became tenants of the landlord class (Nguyen, 1995). After the Second World War ended in 1945, the new government of the Democratic Republic of Vietnam was established. The new government promulgated a decree of reduction of land rents, the abolition of supplementary rents and postponing debts for tenants. The target was to nationalize the land of the Vietnamese and French landlords and to redistribute it to peasants who had little or no land, using the slogan “land for ploughmen”. As a result, about a quarter of the land was redistributed to farmers on a more or less equal basis, benefiting about 73% of the North’s rural population. It came to be that agricultural land could not be sold and rented, but was provided without payment to farmers for them to earn their living.

In 1959, the second Constitution of Vietnam was approved in which three types of land ownership were recognized: state property, collective property and individual property. In 1960, with the collectivization of agricultural land, the state enterprises of agricultural and farming cooperative units were established. In 1971, privately owned land was brought back into collective ownership by voluntary surrender of the farmers.

In 1980, the third Constitution aimed to establish a national economy based on two components: state enterprise sector and cooperative units. The Constitution abolished private and collective ownership of land and vested all land in the ownership of the State but left the right of land use for the land users who were actually using the land (Nakachi, 2001). In 1982, the government introduced the land allocation policy to cooperatives and individuals for their stable and long-term use. The cooperative was authorized to sub-allocate land to households by contractual systems. In 1986, Vietnam adopted an economic reform process as a part of the “doi moi” policy of renovation, leading to the gradual move from a centralized economy to a market one.

In 1988, the Communist Party of Vietnam adopted a new direction, known as Resolution No.10, with the aim of renovating the country’s agricultural production systems. Under this new system, farmers were assigned farmland for long term use from 10 to 15 years and had the

ownership rights over all products originating from the land after subtracting taxes and other commissions to the board of cooperatives but not having the right to transfer the land use. Farmland was classified into three types and was assigned to farm household by each category. The first farmland was distributed equally to each farm household on the basis of number of persons, the second farmland was given to households which had enough labor, experience and capital to operate extra land, and 5% of the land area was a small plot of land to use for growing vegetables or pig raising. The first farmland was distributed to the agricultural population. People who served in the army were also classified as being a part of the agricultural population. People who retired and did not receive a monthly pension but only a lump sum payment were allocated with 50% and prisoners with 70% compared with ordinary farmers. Farmers had to pay more for second farmland including management fees and other contributions. In fact, in many localities, farmers were allocated land equally because land was scarce and farmers demanded that they be allocated land equally. Therefore, each farm household had all of the kinds of land and they had to pay more for a part of their total land. The Land Law stipulated that land users had the right to sell the results of labor and investment on that land. The household was considered a unit of self-economy in agricultural production. In 1989, the state policy to move land allocation from cooperatives to individuals and households was carried out.

In 1992, the Fourth Constitution stipulated that land be a property of the entire people, and the state allocated land to organizations, individuals, and households for their stable and long term use, and provided for the transfer of land use rights by the land users. In 1993, the National Assembly approved a new Land Law on 14<sup>th</sup> July valid from 15<sup>th</sup> October. Based on the 1993 Land Law, the State of Vietnam issued many laws, ordinances, and decrees to put land policies into implementation in the following five years (Nakachi, 2001).

#### **Land reform after “doi moi”**

During the “doi moi” period, a series of policies and laws in the agricultural sector were implemented. The most important policies were the Land Law (1993) and its revised versions (1998, 2001), the new Land Law (2003) and Ordinances 64/CP (1993) and 02/CP (1994) of the government, dealing with the regulations on agricultural and forestry land allocation (Nguyen, 2003). There were also other policies that were directly related to land issues as well as supportive policies.

Under the 1993 Land Law, farmers were allocated with land for long- term and stable use, and were granted five rights of land use: the rights of transfer, exchange, lease, inheritance and mortgage (Nakachi, 2001). The duration of land allocation was 20 years for land used for annual crops and aquaculture, and 50 years for land used for perennial crops. The allocation could be renewed at the end of the period if the holder still had a need for the land. The Land Law also put ceilings on land areas to be allocated to farm households. This limit was 2 ha for annual cropland in the northern and central provinces and 3 ha in the southern provinces. For perennial cropland the limit was 10 ha in communes with flat fields and 30 ha in midland or mountainous communes (Ministry of Agriculture and Rural Development, 2002).

Following the land allocation, agricultural land use titles were issued to farm households. By 1998 land use certificates had been issued to 71% of farm households and by the end of 2000, more than 90% (Do, 2003). For forestry land in upland and mountainous areas, where many traditional and cultural issues complicated land allocation, the certification process took a longer time, and actually the issuing of land use certificates is still continuing (Otsuka, 2007).

In 2001, further revisions to the 1993 Land Law resulted in farmers being assigned the right to transfer their land to relatives, friends or others. The revisions also set out the circumstances for allowing land related changes and procedures for registration of changes. A new

Land Law, replacing the 1993 Land Law and its revisions, was enacted in December 2003 and has been in effect since July 2004. For agricultural land there were no changes in the new law in the duration of land allocation and land area ceilings. However, significantly, for the first time land was officially recognized as being a special good, having a value and hence able to be traded (Sally, 2006). The law confirmed that agricultural land was a significant internal force and capital of the state, and acknowledged that the real estate market was to be encouraged in urban areas. Individual farmers and economic organizations were allowed to participate in the market.

Land policy changes in Vietnam since 1981 were recognized as contributing significantly to production increases and development in the agricultural and rural sectors (Cho, 2001). Total agricultural output increased by 6.7% annually during the period 1994-99 and about 4.6% during the period 2000-03. Food security at the national level was no longer an issue and poverty continuously decreased. But many challenges still exist for agriculture in Vietnam, such as falling agricultural product prices, increasing competition as Vietnam integrates with the global economy through the ASEAN Free Trade Agreement (AFTA) and the WTO, and a slowdown of agricultural production growth rates. Moreover, farmers in Vietnam are likely to remain relatively poor and a high proportion of the population will continue to be involved in agriculture and live in rural areas. This will lead to heavy pressure on the rural sector, with a consequent need for continued policy reforms (Sally, 2006).

Considerable pressure is being exerted on the government in relation to the completion of the allocation, registration of land use right, and to issues related to compensation and the desirability of stable and long term tenure. The government has given land use right to farmers in order to encourage the use of land as if it were their private property, but the state maintains ultimate ownership of the land.

#### **CHARACTERISTICS OF THE STUDY AREA AND FARMERS STUDIED**

Hanoi is the capital of Vietnam and is located on the right bank of the Red River. Present day Hanoi comprises seven inner districts and five suburban districts, which provide the main source of food to the capital. Gia Lam is one of the suburban districts where new factories, industrial and export processing zones are being established. Our study area, Da Ton is a commune in Gia Lam district, located 10 km from the center of Hanoi. The climate in Gia Lam district is favorable to agricultural production, especially for producing rice, vegetables, and fruits.

The total land area of Da Ton commune is about 762.57 ha, of which agricultural land, specialized land, residential land, and forest land constitute 68.4%, 22.5%, 9% and 0.01% respectively. Fallow area is 0.06%. Da Ton commune's population was 11,039 in 2007. The population growth rate in Da Ton commune is currently about 1.65% (2007). Recently, the number of workers has increased from 5,035 (2005) to 5,341 people (2007), but agricultural employment has not increased much, from 3,672 (2005) to 3,872 people (2007). In Da Ton commune, the share of the agricultural labor force is still high, about 79.7%. The industry and service sectors, developed in the cities, were unable to absorb the increasing labor force, which had to be shifted from agriculture to non-agricultural activities. Non-agricultural activities are largely conducted as a part of the household economy. With the exception of a few specialized households, most households are involved in small-scale trading, handicrafts, small industries or selling labor force. Many households have some members working in cities or other regions, who contribute to the household's income. This tendency influences agricultural production, especially agricultural land use. So, the main reason that Da Ton commune was selected for the study is that land use change in this suburban commune has been occurring, with the appearance of a more active tenancy market in rice land, upland and fruit land.

For the purpose of this research a “farm household” was defined on the basis of three criteria: household members shared the same fund or budget, household members ate meals together, and household members were related by blood or marriage. The studied households were chosen because they had a typical farm size in the village and the same land and irrigation conditions.

Table 1 shows some basic characteristics of Da Ton commune and farm households studied. In this commune there were 1,796 farm households with a total population of 11,039 people. Average family size was 4.42 persons, indicating that most children were staying with their parents in this suburban community and the average number of family laborers was 2.14. Da Ton commune was still mainly agricultural in that half of the household income was derived from agricultural sources.

In general, rice occupied the largest area followed by fruit land, corn and beans. Although rice was the most important crop, the area of fruit land has been rapidly increasing.

**Table 1.** General characteristics of Da Ton commune and farm households studied

	Da Ton commune	Under Study
Total population	11,039	163
Number of farm households	1,796	35
Average family size (persons)	4.42	4.66
Agricultural workers	3,832	42
Average no. of workers per household	2.14	2.46
Agricultural income (%)	56.15	47.6

Source: Communal Statistical Office of Da Ton (2008) and field survey (2008)

## LAND TENURE SYSTEMS IN THE STUDY AREA

### Land Ownership

Land ownership carries important sociopolitical as well as economic implications in an agricultural society. As shown in Table 2, agricultural land resources of farmers interviewed could be divided into rice land, upland and fruit land. Of the total 7.85 ha of owned land, 76.7% were rice land, while 14.4% were more or less permanently converted from rice fields to upland for growing vegetables. Total area operated was 9.13 ha including rice land, upland and fruit land with the average being a mere 0.26 ha per household. Since the collective farm managed by the former commune was equally divided and distributed among the commune members in 1989, there were no differences in land area owned on a per family member basis. Differences in land area by household necessarily reflected different family size, based on the Resolution No.10 of Land Law in 1988. It is also noted that some cases of tenancy have emerged in recent years, especially after fruit production became popular.

As a result, there were some farmers who operated a larger area than they actually owned (Table 3). Consequently the number of households with more than 0.36 ha increased. Small farmers (less than 0.18 ha in size) said that they did not want to increase their land area because they needed land only for their self- sufficiency in rice production. Almost all small farmers were young and emigrating to cities or industrial areas in search of off-farm jobs for higher income. The medium size households (HH) (from 0.18 to 0.36 ha in area) tended to expand their land area to promote economic production.

**Table 2.** Land resources of the farm households studied (ha).

	Owned operated		Rented-in		Rented-out		Operated	
	No. HH	Total area	No. HH	Total area	No. HH	Total area	No. HH	Total area
Rice land	35	6.02	1	0.05	2	0.15	35	6.07
Upland	24	1.13	1	0.04	4	0.11	24	1.16
Fruit land	10	0.70	6	1.21	13	0.75	13	1.90
Total	35	7.84	7	1.29	16	1.01	35	9.13
Average/farm		0.22		0.04		0.03		0.26

Source: Survey, 2008.

**Table 3.** Frequency distribution of households by size of farmland area owned and operated (households).

Farm size ( ha)	Owned	Operated
Less than 0.18	10	10
From 0.18 to 0.36	16	13
More than 0.36	9	12
Total	35	35

Source: Survey, 2008.

Also based on the Resolution No.10 of the Land Law in 1988, it must be mentioned that the former communal farm was first broadly divided into a number of blocks according to land and water conditions, each of which was then equally divided among the commune members. In this way, true equality was pursued in land distribution with respect not only to the extent of land area but also the quality of land. Therefore, each household came to possess a number of plots under severe fragmentation.

Table 4 indicates that the average plot size is 0.05 ha and each household possessed 5.8 plots. In other words, the farm households studied owned, on the average, a total of 5.8 plots of 0.05 ha each at 6 different locations in the commune area. More than 70 % of plots had an area from 0.02 to 0.18 ha, constituting 65% of total area, and the proportion of plots having an area over 0.18 ha was only 3%. Generally, not only small farm size but also fragmented plots were the main characteristics of land resources in the study area. The similar finding of small farm size and severe fragmentation was also reported in another commune in Hanoi (Fujimoto and Kitajima, 2003).

### **Land Tenure System**

In terms of tenurial status, there were 12 owner farmers, 16 landlord-owner farmers (who cultivated their own land and also rented-out part of their holding) and 7 owner-tenants (who cultivated their own land as well as rented-in some land from other farmers). As shown in Table 5, there did not exist pure landlords in the study area, and the average area of operated land was a mere 0.26 ha per household. Farmers cultivated a total of 9.13 ha of land, of which owner farmers owned 27.4%, while owner-tenants cultivated 38.1% and landlord-owner farmers cultivated 34.5% of the total. Landlord-owner farmers occupied 4.16 ha of the total 8.89 ha, about 46.8% of total area

but the owner-tenant farmers operated a larger area, 0.5 ha per household compared with only about 0.18 per household for other farmers.

There were a total of 38 tenancy contracts in the village as of February 2008, among which 12 tenancy contracts were for rent-in and 26 for rent-out. By type of land, only one contract was for rice land, one for upland and 10 for fruit land in the case of rent-in contracts. Corresponding figures for rent-out contracts were three, five and 18, respectively. Table 6 shows the nature and characteristics of tenancy contracts. It is seen that fixed rent tenancy predominated. Average period of contract was one, two and 5.6 years in rent-in rice land, upland and fruit land, the longest period being 12 years for fruit land. In the case of rent-out land, the average period of contract was 2.3, 2.2 and 3.9 years for rice land, upland and fruit land, the longest being nine years for fruit land. They were mostly verbal contracts in the case of rice land and upland, while more than 70% of fruit land contracts were in a written form. As to place of residence of landlords and tenants, in the case of rice land and upland, most landlords (tenants) resided inside the village, while only 60% of fruit landlords (tenants) did so.

**Table 4.** Frequency distribution of plots by size.

Size (ha)	No. of Plots		Total area		Average size per plot (ha)
		%	(ha)	%	
Less than 0.02	33	16.18	0.43	4.26	0.013
0.02 to under 0.04	75	36.76	2.27	22.38	0.030
0.04 to under 0.09	73	35.78	4.27	42.08	0.058
0.09 to under 0.18	17	8.33	1.95	19.22	0.115
>= 0.18	6	2.94	1.22	12.07	0.204
Total	204	100	10.14	100	0.050

Source: Survey, 2008.

**Table 5.** Number of households and area (ha) according to land tenure status.

	No. of farms	%	Total area owned	%	Total area operated	%	Average area operated	SD
Owner farmers	12	34.3	2.51	28.2	2.51	27.4	0.21	0.08
Landlord-owner farmers	16	45.7	4.16	46.7	3.15	34.5	0.20	0.12
Owner-tenants	7	20.0	2.23	25.0	3.48	38.1	0.50	0.09
Total	35	100	8.89	100	9.13	100	0.26	

Source: Survey, 2008.

In terms of landlord-tenant relations, one contract in rice land, two in upland in the case of rent-in and one contract in rice land, one in upland and five in fruit land in the case of rent-out were established between distant relatives. One contract in rent-in upland and fruit land, one in rice land, two in upland and five in fruit land in the case of rent-out contract were established between close relatives. The remaining contracts were established between non-relatives.



**Table 6.** Distribution of rented-in and rented-out land in the study area.

	<b>Rented-in</b>			<b>Rented-out</b>		
	<b>Rice land</b>	<b>Upland</b>	<b>Fruit land</b>	<b>Rice land</b>	<b>Upland</b>	<b>Fruit land</b>
<b>No. of contracts</b>	1	1	10	3	5	18
<b>Total area of rented-in (out) land (ha)</b>	0.05	0.04	1.21	0.15	0.11	0.75
<b>Form of tenancy</b>						
Fixed- rent	0	1	10	1	4	17
Rent free	1	0	0	2	1	0
Other	0	0	0	0	0	1
<b>Contract period</b>						
2 years	0	0	2	1	1	3
5 years	0	0	4	0	1	9
10 years	0	0	4	0	2	5
Not clear	1	1	0	2	1	1
<b>Form of contract</b>						
Verbal	1	1	4	3	3	7
Written	0	0	6	0	2	10
<b>Rented in (out) period (years)</b>						
Average	1.0	2.0	5.6	2.3	2.2	3.9
Min	0	0	3	1	1	2
Max	0	0	12	4	4	9
<b>Place of landlord (tenant) residence</b>						
Inside the commune	1	0	4	2	3	11
Outside the commune	0	1	6	1	2	7
<b>Relation to tenant (landlord) farmers</b>						
Close relatives	0	1	1	1	2	5
Distant relatives	1	0	2	1	1	5
Non-relatives	0	0	7	1	2	8
<b>Form of payment</b>						
Cash	0	1	8	0	4	18
Kind (cash equivalent)	0	0	2	1	0	0
None	1	0	0	2	1	0

Source: Survey, 2008.

Forms of rental payment were in cash in most cases. Payment in kind (cash equivalent) was observed in one rent-in fruit land contract and two rent-out fruit land contracts. The tenancy form and amount of payment in this village are presented in Table 7. There were three main types of tenancy contracts: cash, kind (cash equivalent) and rent-free. Rent-free agreement was literally an agreement where no rent, either in cash or kind, was paid to the landlord. This form of tenancy accounting for one contract of rent-in and three contracts of rent-out were found between very close

relatives and mostly for rice land. Through interviews, it became clear that those aged landlords, either retired or active with other employment, allowed their relatives to work on their land without payment of rent on the understanding that the relatives would take good care of their land.

Among 26 cash payment contracts in fruit land observed in village, the highest rental was 16,667 thousand VND per ha, followed by a case of 15,278 thousand VND, while the lowest was 11,111 thousand VND per ha per year. There was little difference between the average rental of rent-in and rent-out fruit land contracts. In the case of upland, there was no difference between rental of rent-in and rent- out contracts.

Payment in kind was practiced only by two rent-in fruit land contracts and one rent-out rice land contract. This was a contract where a fixed amount of unhusked rice was paid as rent. But the tenants did not pay by unhusked rice; they paid in cash equivalent to the value of unhusked rice at the time they paid. In fruit land, the average rental was 3,958 kg of unhusked rice per ha per year, at the time of survey; the price of unhusked rice was 3.75 thousand VND/ kg. And for rice land, the average rental was 1,111 kg of unhusked rice per ha per season, or 2,222 kg per ha per year with the price of unhusked rice being 3.7 thousand VND per kg.

**Table 7.** Form and amount of rental (per ha year<sup>-1</sup>) in tenancy systems.

		Rent- in			Rent- out		
		Rice land	Upland	Fruit land	Rice land	Upland	Fruit land
Rent free		1	0	0	2	1	0
No. of plots		0	1	8	0	4	18
Cash (per ha)	Highest (thousand VND)	0	0	16,667	0	11,111	15,278
	Lowest (thousand VND)	0	0	13,889	0	9,722	11,111
	Average (thousand VND)	0	11,111	15,104	0	10,833	13,703
No. of plots		0	0	2	1	0	0
Kind (cash equivalent)	Highest (kg ha <sup>-1</sup> year <sup>-1</sup> )	0	0	4,028	0	0	0
	Lowest (kg ha <sup>-1</sup> year <sup>-1</sup> )	0	0	3,889	0	0	0
	Average (kg ha <sup>-1</sup> year <sup>-1</sup> )	0	0	3,958	2,222	0	0
	Average (thousand VND)	0	0	14,861	8,000	0	0

Source: Survey, 2008.

It is necessary to discuss factors responsible for the landlords' decisions to rent out their land. As is seen from Table 8, in view of the age of landlords and the frequency of kinship ties involved in tenancy relations, it is not at all surprising to see that two reasons, help relatives (34.6%) and old age or retirement (30.8%), were most frequently mentioned. An additional 26.9% were because of excess land over family need. Distance to the field and too small plot size were responsible for 26.9% each. Off-farm employment of the landowners and the lack of time for farming were responsible for as much as 23.1% of total contracts. Only 3.8% of tenancy contracts were established to meet the landlord's need for a sum of money.

**Table 8.** Reasons for renting out land by 16 landlords

Reasons	No.	%
Help relatives	9	34.6
Old age/ retire	8	30.8
Need money	1	3.8
Land located too far away	7	26.9
Lack of time	6	23.1
Excess land over family needs	7	26.9
Too small	7	26.9
Total tenancy contracts	26	

(Multiple answers)

Source: Survey, 2008.

### Rent function

One important issue in land tenure study is the determination of rental levels. Thus, analysis of rental determination will provide another view of the nature of landlord-tenant relations among the farmers. This is attempted by the estimation of a rent function. A total of 19 landlords and tenants were interviewed with 28 contracts in fruit land (citrus cultivation), which formed the basis for the estimation of the rent function.

The earlier discussion of tenancy relations suggested the importance of social factors such as kinship ties in landlord-tenant relations. Under socially oriented tenancy relations, the relative bargaining powers of both landlord and tenant may play a very small role. The final model used for the estimation of rent function is as follow:

$$R = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5$$

R is the average rent per ha per year for fruit land tenancy contract, expressed in thousand VND.

X<sub>1</sub>: the area of rented land (ha)

X<sub>2</sub>: total years rented (year)

X<sub>3</sub>: output value (million VND/ha/year)

X<sub>4</sub>: a dummy variable for the existence of kinship ties in landlord-tenant relations; 0 for relatives (including distant relatives) and 1 for non-relatives

X<sub>5</sub>: a dummy variable of tenant residence, 1 for tenant living inside the village and 0 for outside the village

Because of the fragmentation of agricultural land, especially in the north of Vietnam, making the farm size larger means renting more plots of land, causing production cost to rise. Moreover, in order to expand their fruit land as much as possible, the tenants also accepted a somewhat higher rent level.

Total years rented is an important factor in rental determination. Land for fruit needs a long time to become economically productive. Rice or vegetable can be harvested two or three times per year but fruit trees take at least one year for short-maturing fruit or even three or four years in the case of perennial fruit. Therefore, the longer the rental period, the more expensive the rent would be.

The output value is an economic variable in determining rental rate. Citrus land that is most fertile, the most easily worked and the closest to the market would make the lowest cost and highest output. It is expected that the higher the output value, the higher the rental.

With regard to social considerations in rental determination, it is possible that kinship based tenants may be in a better position than otherwise. The landlord who was a tenant's relative (including distant relatives) was expected to make the rental cheaper than for non-relatives. Beside the kinship ties in landlord-tenant relations, the tenant residence was also important in deciding the rental level. Tenants living inside the same village may have expected a higher rental compared with tenants living outside the village because they are shy of negotiating the rental when they know each other well. Results of the estimation are presented in Table 9. Regression coefficients for the area of rented land and total years rented are statistically significant at the 10% level. This means that the larger the land area rented the higher the rental, as expected. The results suggest that if the land area under contract was larger by one ha the rental would increase by roughly 5.5 million VND per ha. The longer the period rented, the higher the rental per ha. Average period of contract was 5.6 years in rent-in and about 4 years in rent-out fruit land, the longest period of rent-in contract being 12 years. Landlords may want to rent-out on a short contract for the purpose of easily changing the rental under the market price (usually increasing it) or collecting their land back. However, fruit production is different from annual crops in that it would take a certain period to attain economic efficiency. In this case, the production cycle of citrus is longer than that of annual crops and the level of production depends on the age of the trees. So the tenants want to rent-in land on a long-term contract and accept higher rental payment for their stable production. Therefore, the longer the period rented, the longer the fruit production, leading to a higher net return to land.

**Table 9.** Fruit land rent function estimates

	<b>Reg. coeff.</b>		<b>t value</b>
Constant	10,864.66		16.62
Area of rented land (ha)	5,513.87	*	1.67
Total years rented (years)	137.83	*	1.73
Output (million VND per ha per year)	14.34	**	2.30
Kinship (dummy)	800.33	**	2.79
Tenant residence (dummy)	59.40		0.26
N	28		
R square	0.85		
F value	24.15		

\* Significant at the 10% probability level.

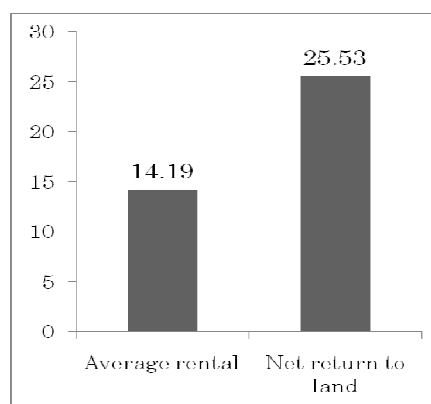
\*\* Significant at the 5% probability level.

Source: Survey, 2008.

A regression coefficient for output value is significant statistically at the conventional 5% probability level and has the expected signs. Results of the estimation suggest that if the output per one hectare of land under contract increased 1 million VND per year, the rental would increase 14 thousand VND per ha. Compared with the output value, this value is rather small but it is still significant in the determination of rental level. A regression coefficient for kinship ties is also significant statistically at the conventional 5% probability level. The kinship variable appeared to have a strong relationship to rental levels. The regression coefficient indicated that the existence of

kinship ties in landlord-tenant relations tended to lower the level of rent. The magnitude of the estimated regression coefficient suggests that the existence of kinship ties reduces the rental level by 800 thousand VND from the mean rental of 14 million VND per ha on the average. In contrast, regression coefficient for the place of tenant residence is statistically not significant at the conventional 10% level.

A question arises as to the determination of rental in relation to net return to fruit land. Table 10 shows that the net return to fruit land was about 25.5 million VND per ha per year, while the average rental was 14.2 million VND per ha per year. So, it can be said that the rental of fruit land was lower than its contribution to the value of fruit production. The average rental was only 55% of net return to land (Fig. 1), encouraging farmers to rent in more land. The value of fruit production was higher than the rent because of high demand in the domestic market. As Vietnamese income increased, consumers shifted toward higher quality items such as fruits and vegetables. The price of fruit has been increasing while the level of land rent has not changed so much.



**Fig. 1.** Comparison of average rental, net return to land (million VND hectare<sup>-1</sup> year<sup>-1</sup>)

**Table 10.** Net return to fruit land (Thousand VND sao<sup>-1</sup> year<sup>-1</sup>)

Cost	Thousand VND
Variable cost (a)	3632.78
Fixed cost (b)	328.8
Land tax (c)	61.56
Land rented (d)	249.23
Total costs (A= a + b)	3961.58
Gross income (B)	4631.54
Profit (A-B)	669.96
Net return to land (B-A + c + d)	980.75

Source: Survey, 2008

Thus, the result of analysis of rent function is consistent with the hypothesis. The process of rental determination was seen to be affected by economic factors such as output value per hectare per year and social factors such as kinship ties, and the rental level of fruit land was still low compared to the net return from fruit farming.

## **CONCLUSIONS**

The discussion in this paper concentrated on land tenure system and tenancy relations in a village in Red River Delta. There were three kinds of land used in Da Ton commune: rice land, upland and fruit land. In the studied area farm sizes were extremely small, the largest operated farm household is only 0.7 hectare and only 0.26 hectare on average. The plots of cultivated land were dispersed over many places and the average size per plot was only 0.05 ha. There also emerged rented-in and rented-out tenancy contracts in recent years in the study area, which were mostly observed in fruit land.

The market for the exchange of land use rights has not been well developed. The great majority of tenancy contracts were found to be between relatives and social aspects of tenancy were clearly observed, in that tenancy contracts sometimes involved no rental payment. Despite the verbal agreements, most contracts were renewable. While the big farmers are expanding their farmland, especially in fruit land, the number of landless farmers has been increasing. If this tendency continues, it would certainly lead to social instability.

The informal and flexible nature of tenancy relations was also confirmed by the estimation of a rent function. On the other hand, while land tenure systems were arrangements concerning the land factor in production process, tenancy relations were established as a part of the broader socio economic system in the village. In this paper, analysis of tenancy was based on information obtained from both landlords and tenants but not for the same tenancy contracts and limited to only one side of landlord-tenant relations, which constitutes the weak point of this analysis. Moreover, since rental of land for citrus began to occur a few years ago, there is no past data about rental levels. For deeper analysis it is necessary to adjust the long term rental with the inflation rate as well as to examine farm business efficiency in relation to land tenure.

## **REFERENCES**

- Cho, K. 2001. Agriculture in Economic Growth after the Innovation. In K. Cho and H.Yagi (Eds.) Vietnamese Agriculture under Market-Oriented Economy. The Agricultural Publishing House. Hanoi.
- Clark, C. and M. Haswell. 1970. The Economics of Subsistence Agriculture. Macmillan and Co., London.
- Communal Statistical Office of Da Ton. 2008. General Statistical Data of Da Ton village. Department of Statistics of Gia Lam District. Hanoi.
- Do, K.C. 2003. Rural Development for Poverty Reduction and Growth in Vietnam. Vietnam Journal of Agriculture and Rural Development. No.1: 30-32.
- Fujimoto, A. and S. Kitajima. 2003. Farm Management Analysis of Rice and Vegetable growing in Van Noi Commune, Hanoi. J. ISSAAS. 9(3): 97-131
- Johnson, D.G. 1950. Resource allocation under share contracts. Journal of Political Economy Vol.58: 111-123
- Ministry of Agriculture and Rural Development. 2002. Some New Strategies and Policies on Agriculture, Forestry, Aquaculture, Water Resource and Rural Development. Agricultural Publishing House. Hanoi.
- Nakachi, S. 2001. Structure of land holding in rural areas and the land law. In K.Cho and H.Yagi (Eds.) Vietnamese Agriculture under Market-Oriented Economy. The Agricultural Publishing House. Hanoi.

- Nguyen, S.C. 1995. *Agriculture of Vietnam. 1945-1995*. Statistical Publishing House, Hanoi, Vietnam.
- Nguyen, S.C. 2003. *Vietnam Rural Agriculture in the Renovation Period*. Statistical Publishing House. Hanoi.
- Otsuka, N. 2007. A study on land-use tight under the new land law of Vietnam (Japanese). *J. Rikkyo University*. 67(2): 77-90
- Ricardo, D. 1911. *The Principles of Political Economy and Taxation*. Everyman's Library. London
- Sally, P.M., T.G MacAulay, and V.H. Pham. 2006. *Agricultural Development and Land Policy in Vietnam*. Australian Center for International Agricultural Research, Australia.
- The World Bank. 2005. *Agricultural Diversification in Vietnam*.
- Vo, V.D. 2001. Labor and Employment in Rural Areas: Situation and Solutions. *Agriculture and Rural Development Magazine*