

LAND LEASE MARKET AND AGRARIAN RELATIONS- A COMPARATIVE ANALYSIS

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The paper analyses the empirical evidence of land distribution and tenancy contracts in different crop regions in two different states namely, Andhra Pradesh and Tamil Nadu. The data on land distribution, lease contracts and agrarian relations have been collected from eight villages during the crop year 2003-04. The findings indicate that there is disproportionate distribution of land holdings across the farm size groups and the gap is very high in wet crop regions. The evidence shows that the distribution of tenancy contracts is more predominant in wet crop regions when compared to dry crops and all the lease agreements are oral in nature. Fixed rentals are predominant in all crops and long term contracts for commercial crop and short term contracts for subsistence crops are prevalent in study villages. Individual decision making predominates and few share with their landowners only when they feel quandary in the production process. The results from the logit analysis indicate that own land, family assets, family income, tenant age and caste status are the major determining factors to enter in lease contracts in the study regions.

INTRODUCTION

Land and labour are the major components of the process of production. In every process of production, relations of production develop inevitably. However, the structure of Indian agriculture has undergone a long historical process of formation and transformation. In ancient times, there were the self-sufficient and autonomous village communities, which were based on possession of common land. But when the feudal or patron-client relations emerged and superior rights of few persons over land came to be recognized vis-à-vis those who cultivated land by supplying their labour power, in one social existence from another, the ancient village communitarian system collapsed. The authenticity and authority of upper caste people was evident when they occupied crucial positions as manifested through a variety of traditional and customary privileges and obligations (Chatopodyay and Battacharyya, 1984). Ownership of the land was concentrated mostly in the hands of higher castes; the large size of tenants of middle and backward castes traditionally cultivating land were available to lease-in and so were agricultural labourers from the deprived castes (Scheduled castes and Tribes) ready to be hired as farm hands in return of wages more often paid in kind than in cash.

The literature on land and tenancy system was echoed in the classical and neo-classical writings. Sharecropping contracts predominantly emerged in land lease transactions and cultivators faced burdensome and unpredictable taxes through complex restrictions on both internal and external trade regime. In the physiocrat system, the productive (Cultivators), proprietary (lessors) and sterile

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(artisans and craftsman) classes existed and the productive class paid rent to the proprietary class and the sterile class purchased food and raw materials from the productive class and product manufacturers (Currie, J.M, 1981). The security of land ownership and proprietary rights were indispensable and did not help the proprietary class; whereas in the colonial period, the land distribution system was highly monopolized and was kept in few hands. The Zamindari, Mahalwari and Raitwary tenurial systems in that period bestowed full proprietary title on erstwhile tax collectors from productive class, and downgraded the position of owner cultivators. In the same way, the sterile class paid higher rent to their lessors (rack renting) and made the landowners to lease out land and enjoy the fruits from their lessees (Dhanagare, 1983&91). However, in the pre and early independence periods of agricultural structure in India, the lands were in the hands of landlords, moneylenders and traders. They used to cultivate their lands through tenancy or with the help of hired labourers. The higher caste communities concentrated and enjoyed the landownership rights¹.

Introduction of land legislations and tenurial reforms in Indian agriculture have made depeasantization and proletarianization of small peasants and brought tenancy protection in the countryside (Kotovsky 1964) in mid sixties. However, in recent decades population pressure and disproportionate distribution of resources has made the society both ecologically and economically imbalanced. The patron-client relations emerged and superior rights of a few persons over land came to be recognized vis-à-vis those who cultivated land with the help of labour. Commencement of green revolution through introducing new farm technology, mechanization and commercialization of agriculture has brought efficiency to the production process. Nevertheless, the existence of inequalities among the social groups by strengthening the rich landowners has created a feeling of discontent and frustration among the marginal and small peasants² and the reducing employment opportunities for landless agricultural labourers, have prompted them to battle for an egalitarian society. From the above background an attempt has been made to focus on land and tenancy distribution for understanding the agrarian relations in the rural sector for different crops in different states.

DATA AND METHODOLOGY

Keeping in view the magnitude of the problem and its importance in the developmental strategies of a country like India, it will be a great practical significance to study the problem at crop level following an intensive approach. In order to get a clear perspective of land distribution and lease contracts, a pre-tested comprehensive schedule (questionnaire) was designed especially for the purpose and canvassed in the study area. West Godavari, Chittoor and Srikakulam districts from Andhra Pradesh and Tanjavur, Paramakudi, and Cuddalore districts from Tamil Nadu were selected. Households were selected on random sampling basis and the land holding households were divided into four groups such as marginal, small, medium and large farmers. The crops were selected on the basis of subsistence and commercial crops covers paddy, ground nut, sugarcane and cashew nut. The total sample of households is 400 and consists of 50 households from each crop.

¹ The dominant classes were those who enjoyed elite position in the villages by virtue of their social and economical predominance having landownership over extensive areas and were also involved in land lease practices and exploiting the labour services through keeping perpetual indebtedness from deprived caste communities.

² The most common view of the difference between marginal and large farms is the inverse relationship between the farm size and productivity. The marginal farmers have low accessibility to technology in their small farms vice-versa of large farms. Since the large farmers can diversify risk more easily than marginal farmers, they are less risk averse and come closer to maximizing expected net profitability than marginal farmers. Also see Binswanger 1994.

Logit Model

To identify the factors involved in inter-linked land-lease contracts in selected crop villages, logit analysis is employed. The model is given by.

$$Y_i = \beta_1 + \sum_{j=2}^6 \beta_j x_{ji} + \sum_{j=1}^2 d_j D_j + u_i$$

In the above equation, y_i is a binary variable taking the value 1 if the farmer is involved in land lease contracts and zero otherwise,

D_1 and D_2 are caste and literacy dummies respectively,

X_i are the other explanatory variables,

β s and d s are the coefficient and

u_i is the error term.

DISTRIBUTION OF OWNERSHIP AND OPERATIONAL HOLDINGS

The structure of land holdings has been seen as an important determinant of equity and efficiency. During the twentieth century, population pressure on limited land resources has forced to innovate new practices for maximum utilization of land resources. This has also lead to numerous changes in land and land lease market. The southern states like Andhra Pradesh (AP) and Tamil Nadu (TN) with predominantly agrarian economies brought new policies in land distribution and land tenancy legislation to minimize the pressure on population through land reforms. In a limited sense, the structure involves the farmers' relative position with respect to ownership and operational holdings. Ownership (OWL) and operational land (OPL) holdings by crop and state wise distribution are shown in table.1. The table indicates that the distribution of OWL across the groups is highly disproportionate. In paddy crop in AP, about 50 per cent of marginal farmers (MF) holds 11.74 per cent of land when compared to 14 per cent of large farmers (LF) holding more than 50 per cent of total lands. In TN, 44 per cent of MF holds 15 per cent, whereas 12 per cent of LF holds 30 per cent. Similarly, in sugarcane crop in AP, 52 per cent of MF holds 16 per cent of own lands and 12 per cent of LF holds more than 30 per cent. In TN, respectively, 48 and 14 per cent of the above group holds 14 and 44.7 per cent of total lands. Similarly, in dry crops of groundnut and cashew nut, the variation across the size groups is lower in AP when compared to their counterparts in TN. The table also shows that in groundnut crop in AP, 46 per cent of MF holds 20 per cent of lands and 14 per cent of LF own 35 per cent of total lands. Whereas, in TN, 48 per cent of MF holds 16 per cent and 14 per cent of LF owns more than 46 per cent. In cashew nut crop in AP, 48 per cent of MF holds 21.1 per cent and 8 per cent of LF owns 24.3 per cent and in TN, 36 per cent of MF and 16 per cent of LF holds 10.5 and 53.88 per cent of ownership holdings respectively. The analysis reveals that the variation in ownership of land distribution is highly disproportionate in wet crops in Andhra Pradesh and dry crops in Tamil Nadu.

Distribution of operational land holdings (OPL) shown in the table, indicates that the variation across the size groups is lower when compared to ownership land holdings both in AP and TN. In paddy crop in AP, 50 per cent of MF operates 22.03 per cent, and 14 per cent of LF operates 33 per cent of total operated lands. Similarly, in TN, 44 per cent of MF and 12 per cent of LF operates 15 and 33 per cent of operational holdings respectively. In sugarcane crop in AP, 52 per cent of MF operates 24.37 per cent and 12 per cent of LF operates more than 34 per cent. In TN, 48 per cent and 14 per cent of MF and LF respectively operates 15.88 and 43.91 per cent of total operated lands. On

Table: 1. Distribution of Farm and Area According To Size Group of Holdings

Andhra Pradesh															
No of Households						Owned Land Holdings (Acres)						Operated Land Holdings (Acres)			
	P	SC	GN	CN	TOT	P	SC	GN	CN	TOT	P	SC	GN	CN	TOT
MF	25 (50.00)	26 (52.00)	23 (46.00)	24 (48.00)	98 (49.00)	27.6 (11.74)	30.4 (16.3)	38.25 (19.38)	32.4 (20.83)	128.65 (16.6)	69.7 (22.03)	57.4 (24.37)	45.75 (21.75)	32.4 (20.27)	205.25 (22.56)
SF	11 (22.00)	10 (20.00)	13 (26.00)	16 (32.00)	50 (25.00)	42 (17.86)	35.6 (19.1)	41.85 (21.20)	51.85 (33.33)	171.3 (22.1)	81.2 (25.66)	43.6 (18.51)	45.85 (21.79)	53.85 (33.69)	224.5 (24.34)
MDF	7 (14.00)	8 (16.00)	8 (16.00)	6 (12.00)	29 (14.50)	47 (19.49)	52.5 (28.2)	48.25 (24.20)	33.5 (21.53)	181.25 (23.5)	47 (14.85)	52.5 (22.30)	48.75 (23.18)	34.5 (21.58)	182.75 (19.82)
LF	7 (14.00)	6 (12.00)	6 (12.00)	4 (8.00)	23 (11.5)	118.5 (50.40)	67.8 (36.4)	69 (34.96)	37.8 (24.31)	293.1 (37.8)	118.5 (37.45)	82 (34.82)	70 (33.28)	39.1 (24.46)	309.6 (33.58)
TOT	50 (100)	50 (100)	50 (100)	50 (100)	200 (100)	235.1 (100)	186.3 (100)	197.35 (100)	155.55 (100)	774.3 (100)	316.4 (100)	235.5 (100)	210.35 (100)	159.85 (100)	922.1 (100)
Gini Co-efficient						0.53	0.45	0.39	0.36	0.45	0.35	0.37	0.35	0.37	0.36
Tamil Nadu															
MF	22 (44.00)	24 (48.00)	24 (48.00)	18 (36.00)	88 (44.00)	32.5 (14.98)	31 (13.93)	33.55 (15.93)	31.75 (10.56)	128.8 (13.55)	33.5 (15.30)	36 (15.88)	40.55 (19.00)	141.75 (31.38)	251.8 (22.67)
SF	11 (22.00)	10 (20.00)	10 (20.00)	13 (26.00)	44 (22.00)	41 (18.89)	32.5 (14.61)	33.5 (15.91)	44 (14.63)	151 (15.88)	44 (20.09)	31.62 (13.95)	33.35 (15.63)	66 (14.61)	174.97 (15.75)
MDF	11 (22.00)	9 (18.00)	9 (18.00)	11 (22.00)	40 (20.00)	72 (33.18)	59.5 (26.74)	46 (21.85)	63 (20.95)	240.5 (25.29)	69.5 (31.73)	59.5 (26.26)	42 (19.68)	82 (18.15)	253 (22.78)
LF	6 (12.00)	7 (14.00)	7 (14.00)	8 (16.00)	28 (14.00)	71.5 (32.95)	99.5 (44.72)	97.5 (46.31)	162 (53.86)	430.5 (45.28)	72 (32.88)	99.5 (43.91)	97.5 (45.69)	162 (35.86)	431 (38.80)
TOTAL	50 (100)	50 (100)	50 (100)	50 (100)	200 (100)	217 (100)	222.5 (100)	210.55 (100)	300.75 (100)	950.8 (100)	219 (100)	226.62 (100)	213.4 (100)	451.75 (1000)	1110.7 (100)
Gini Co-efficient						0.41	0.48	0.46	0.48	0.46	0.39	0.46	0.42	0.18	0.34

Source: Field Survey, 2003-04, Figures in parentheses are percentages.

Note: P: Paddy, SC: Sugarcane, GN: Groundnut, CN: Cashew Nut and TOT- Total.

MF- Marginal Farmer, SF- Small Farmer, MDF- Medium Farmers and LF- Large Farmers

the contrary, in dry crop regions in AP, the variation between operational and ownership landholdings across size groups is insignificant when compared to their counterparts in TN. The table indicates that in groundnut crop in AP, 48 per cent of MF operates 21.75 per cent and 12 per cent of LF operates 33.28 per cent. In TN, 48 per cent and 14 per cent of MF and LF operates 19.1 and 45.07 per cent respectively. In cashew nut crop in AP, 48 per cent of MF operates 21.75 per cent and 12 per cent of LF operates 33.28 per cent.

In TN, 48 per cent and 14 per cent of MF and LF operates 19.1 and 45.07 per cents respectively. In cashew nut crop in AP, 48 per cent of MF operates 21.75 per cent and 8 per cent of LF operates 24.46 per cent of total operated lands. In TN, 36 per cent of MF operates 31.38 per cent and 14 per cent of LF operates 35.86 per cent of total operated lands. The analysis reveals that the variation of ownership land holding across the size group is high in wet crop regions in Andhra Pradesh when compared to their counterparts in Tamil Nadu. It is found that the variation in operational land holdings across the groups is low in wet crop in AP and it is insignificant in their counterparts except in the dry commercial crop of cashew nut.

LAND LEASE CONTRACTS: TENANCY

Contracts regulate economic transactions and contract theory is a cornerstone of economics. An understanding of the phenomenon of tenancy is essential to have an idea about agrarian relations and tenancy conditions reflect the demand and supply position of land in agriculture. The importance of land lease contracts is often stressed in the inter-state comparisons of economic performance in India. Most of the land market operates through tenancy rather than outright sale since ownership of land is considered to be one of the most important sources of security and social status by the cultivators³. The permanent transfer of land is usually by inheritance or gift and the cultivators sell the land only under extreme hardship. However, the temporary transfer of land takes place through the institution of tenancy which is one of the most important devices to facilitate the resource adjustments. The literature on the institution of tenancy particularly on the issues pertaining to relative efficiency of different tenurial/contractual arrangements has proliferated during the last few decades (Cheung, 1969; Bardhan and Srinivasan, 1971; Stiglitz, 1974, Birthal and Singh, 1991). However, the system of cultivation under lease contract is traditional albeit a controversial form of contractual arrangements. Prior to Independence, it was regarded as an integral part of feudal agrarian relations in which absentee landlords leased out land to poor agricultural workers who has no land rights or security of tenure. The big landlords enter the lease contracts and involve other factors and product interlinkages and exploit them by collecting higher rent in their fields, pay low wages for their labour services, extract high interest rates on production and consumption loans and buy their surplus produce at lower prices⁴.

³ Most of the landlords in advanced region, who are involved in non-farm activities have reported that they lease-out their lands rather than selling.

⁴ The demand for agricultural lease land is relatively straightforward, and depend principally on the land quality and the local resource endowments of complimentary inputs to production related, labour, managerial services, draft power, and water to name the most important.

Table 2, Distribution of Sample Household in Participating Land Lease Market

S.No	Andhra Pradesh				Tamil Nadu			
Crops	Leased		Own cultivation	Total	Leased		Own Cultivation	Total
	In	Out			In	Out		
Paddy	15 (30.00)	14 (28.00)	21 (42.00)	50 (100)	09 (18.00)	02 (4.00)	39 (78.00)	50 (100)
Sugarcane	13 (26.00)	09 (18.00)	28 (56.00)	50 (100)	07 (14.00)	02 (4.00)	41 (82.00)	50 (100)
Groundnut	09 (18.00)	03 (6.00)	38 (76.00)	50 (100)	07 (14.00)	01 (2.00)	42 (84.00)	50 (100)
Cashew Nut	04 (8.00)	0 (0.00)	46 (92.00)	50 (100)	05 (10.00)	02 (4.00)	43 (86.00)	50 (100)
All Crops	41 (20.5)	26 (13.00)	133 (66.5)	200 (100)	28 (14.00)	07 (3.5)	165 (82.5)	200 (100)

Source: Field Survey, 2003-04

Note: Figures in parentheses Indicates percentages.

The extent of land lease market across the crops, both in AP and TN, is shown in table.2. It is indicated that the extent of lease participation is high in irrigated crop villages when compared to dry crops. In paddy crop in AP, 58 per cent is involved in lease contracts, which comprises 30 per cent and 28 per cent of leased-in leased-out contracts, respectively. Similarly, in TN, 22 per cent of lease contracts exist in paddy crop and out of that 18 per cent in leased-in and just 4 per cent involve in leased-out contracts. In sugarcane crop in AP, 40 per cent of farmers involved in lease contracts, comprise 26 and 18 per cent of lease-in and lease-out contracts, where it is inactive in their counterparts in TN. The fact that the incidence of lease market is inactive in the dry crop villages in both states is due to uncertainty in the cropping pattern and unfavourable lease conditions. The table shows that in cashew nut crop in AP, 8 per cent is involved in lease-in contract and it is lower than their counterparts in TN, where 10 and 4 per cent is involved in lease-in and out contracts, respectively.

The analysis of lease contracts across the farm size distribution is shown in table.3. It reveals that the extent of lease-in contracts is predominant in marginal and small farmers when compared to medium and large farmers who dominate lease-out contracts. In paddy crop in AP, an extent of 66.7 per cent of MF cultivates 51.8 per cent of lease-in lands where more than 60 per cent of land is leased out by medium and large farmers. On the contrary in Tamil Nadu, the medium and large farmers dominate both lease-in and out contracts. Similarly, in sugarcane crop in AP, MF and SF involve more than 50 per cent lease-in contracts when compared to medium and large farmers who are active in lease-out contracts to an extent of 80 per cent of total lease-out land. MF dominates in lease market both in AP and TN and uncertainty and adverse conditions are the major factors for decelerating the tenancy system. MF and SF are dominant in lease-in contracts where the medium and large farmers occupy major position in lease-out contracts. The MDF and LF enjoy the land rights as well as its fruits without efforts and extract their tenants through higher rentals and interest rates. Therefore, the

Table 3, Pattern of Tenancy by Size Group of Holdings in Selected Crop Villages in Andhra Pradesh/ Tamil Nadu

Andhra Pradesh		Sugarcane						Groundnut						Cashew Nut					
Farm Size	Paddy	Lease (area in Acres)						Lease (area in Acres)						Lease (area in Acres)					
		HH	In	HH	Out	HH	In	HH	In	HH	Out	HH	In	HH	In	HH	Out	HH	Out
<2.5	10 (66.7)	42.1 (51.8)	3 (21.4)	2.9 (2.5)	9 (69.2)	28 (59.6)	4 (40)	2.6 (7.4)	6 (60)	7.5 (50.0)	—	—	—	—	—	—	—	—	—
2.51 to 5.00	5 (33.3)	39 (48.2)	2 (14.3)	8.2 (7.0)	2 (15.4)	8 (17.0)	1 (10)	4.5 (12.8)	2 (20)	3 (20.0)	—	—	5 (79.3)	3 (75)	—	—	—	—	—
5.1 to 10.00	—	—	4 (28.5)	23 (19.7)	—	—	3 (30)	17 (48.4)	1 (10)	0.5 (3.3)	—	—	—	—	—	—	—	—	—
10.01 & Above	—	—	5 (35.7)	82.5 (70.7)	2 (15.4)	11 (23.4)	2 (20)	11 (31.3)	1 (10)	4 (26.7)	3 (100)	30 (100)	13 (20.6)	1 (25)	—	—	—	—	—
Total	15 (100)	81.1 (100)	14 (100)	116.6 (100)	13 (100)	47 (100)	10 (100)	35.1 (100)	10 (100)	15 (100)	3 (100)	30 (100)	6.3 (100)	4 (100)	—	—	—	—	—
Tamil Nadu																			
<2.5	1 (12.5)	1 (6.7)	—	—	5 (83.3)	5 (87.7)	—	—	6 (85.7)	7 (87.5)	—	—	—	3 (50)	110 (83.3)	—	—	—	—
2.51 to 5.00	3 (37.5)	3 (20.0)	—	—	1 (16.7)	0.7 (12.3)	1 (50)	3.5 (77.8)	—	—	—	—	2 (1.5)	2 (33.3)	—	—	—	—	—
5.1 to 10.00	3 (37.5)	10.5 (70.0)	—	—	—	—	1 (50)	1 (22.2)	1 (14.3)	1 (12.5)	1 (100)	5 (100)	20 (15.2)	1 (16.7)	1 (50)	1 (1.9)	1 (50)	1 (98.1)	1 (100)
10.01 & Above	1 (12.5)	0.5 (3.3)	2 (100)	8 (100.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	8 (100)	15 (100)	2 (100)	8 (100)	6 (100)	5.7 (100)	2 (100)	4.5 (100)	7 (100)	8 (100)	1 (100)	5 (100)	132 (100)	6 (100)	2 (100)	2 (100)	51 (100)	51 (100)	51 (100)

Source: Field survey 2003-04

Note: Figures in brackets are per centages

liberalization of tenancy laws which may help MDF and LF to raise their holdings and income levels is causing income-inequality among the groups.

LEASE CONTRACTS- LOGIT ANALYSIS

Given the extent of lease contracts in selected crop villages, various factors may be responsible for these transactions for their sustainability or improve their economic opportunity. Now an attempt is made here to examine the factors that influence the land lease contracts, by employing the Binary Logit Model.

Specification of Variables:

Dependent Variable :

LAND LEASE = 1, if the farmer enters land lease contract
= 0, otherwise.

Explanatory Variables

CASTE = 1, if the household belongs to SC,
= 0, otherwise.

Dummy Variable

EDUCATION = 1, if the Head of household is literate,
= 0, otherwise.

AGE Age of the Household Head (in years).

WOP Number of working people in household (nos.).

OWL Own lands of the households (in acres).

NFA Non-farm assets (in Rs).

PCI Family per-capital income (in Rs).

The results of the binary logit model are given in table 4. The coefficients of all the variables in Andhra Pradesh have carried expected signs. The coefficient of tenant age and owning land, assets position and income are statistically significant. The results show that the variables such as age and own lands are negatively associated with the dependant variable and asset and family income have positive signs. The results reveal that if the farmer is an aged person or a big landowner, the probability of lease-in contract is less. In contrast, if the farmer possesses better economic (asset and income) position, he can involve lease-in contract to improve his economic condition. However, for the villages in Tamil Nadu, when all the variables are taken together, no variable turned out to be significant and some even did not have the expected signs. The zero order correlation matrix was studied and the model was re-fitted after dropping some variables; education and own lands turn out to be significant to influence the farmer more to involve in lease-in contracts. In the case of the lease-out contracts in Andhra Pradesh, the variables such as age, own lands and income position have positive association with the dependant variable and are statistically significant at 10, 5 and 1 per cent levels. It indicates that the probability to involve in lease-out contract is high if the landowner is aged or a big landlord and possesses good economic position. In the same way, the villages in Tamil Nadu, the caste and own land coefficients are statistically significant at 5 per cent level.

Table 4, Extent of Land Lease Contracts-Logit Analysis

S.No	Variables	Andhra Pradesh		Tamil Nadu	
		Leased		Leased	
		In	Out	In	Out
1	Constant	0.346	-6.607	-1.291	-6.750
2	Caste	0.074 (0.16)	0.988 (1.54)	-0.075 (0.14)	2.110 (2.33)**
3	Literacy	-0.483 (1.20)	-0.637 (1.00)	-0.807 (1.85)***	—
4	Age	-0.036 (2.21)**	0.076 (3.46)*	0.009 (0.54)	0.053 (1.30)
5	Working Population	0.085 (0.72)	-0.254 (1.58)	-0.019 (0.21)	-0.262 (0.86)
6	Own Land	-0.306 (2.96)*	0.192 (2.50)**	-0.166 (1.69)***	0.135 (2.37)**
7	Non Farm Assets	0.071 (2.56)**	-0.007 (0.25)	—	—
8	Family Income	0.078 (1.69)***	0.107 (2.18)***	0.008 (0.17)	—
Log likelyhood		-93.396	-52.613	-74.710	-22.453
R ²		0.091	0.335	0.0562	0.260
Probability		0.008	0.005	0.179	0.003
No. Observation		200	200	200	200

Note: Figures in parentheses indicates 't' values

***, ** and * indicates 10 per cent and 5 per cent and 1 per cent level of significant.

It is pertinent to examine the role of inter-crop differences in influencing the lease contracts. It is hypothesized that the incidence of lease contracts is more predominant in the wet crop regions when compared to the dry regions. The results are shown in table 5 for AP and table 6 for TN. The results indicate that the non-farm assets in paddy crop have positive association with the dependant variable and are statistically significant at 10 per cent level.

Table 5, Crop Wise Lease Contracts in Andhra Pradesh - Logit Analysis

S.No	Variables	Paddy	Sugarcane	Groundnut	Cashew Nut
1	Constant	-0.399	0.162	-2.343	-1.220
2	Caste	0.869 (1.21)	-0.732 (0.73)	-0.365 (0.33)	—
3	Literacy	—	-0.672 (0.80)	0.668 (0.70)	—
4	Age	—	-0.017 (0.94)	-0.055 (1.03)	—
5	Working Population	-0.157 (0.98)	0.083 (0.29)	0.413 (1.24)	-0.239 (0.67)
6	Own Land	-0.032 (0.32)	0.367 (1.86)***	0.342 (1.88)***	—
7	Non Farm Assets	0.093 (1.73)***	—	0.450 (2.85)*	-0.514 (1.75)***
8	Family Income	0.077 (0.79)	0.391 (2.12)**	—	0.213 (1.04)
Log likelihood		-31.221	-29.601	-18.770	-11.420
R ²		0.082	0.142	0.319	0.180
Probability		0.348	0.133	0.007	0.169
No. Observation		50	50	50	50

Note: Figures in parentheses indicating 't' values

***, **, * Indicates 10 per cent, 5 per cent and 1 per cent significant levels.

Table 6, Crop Wise Lease Contracts in Tamil Nadu - Logit Analysis

S.No	Variables	Paddy	Sugarcane	Groundnut	Cashew Nut
1	Constant	-1.212	-0.345	-2.496	-0.616
2	Caste	-1.380 (0.57)	2.264 (1.95)***	—	-0.714 (0.60)
3	Literacy	-1.679 (1.73)***	-3.355 (2.04)**	-1.713 (1.76)***	-1.987 (1.64)***
4	Age	-0.017 (0.40)	-0.003 (0.07)	-0.054 (1.24)	—
5	Working Population	0.038 (0.11)	-0.425 (1.04)	-0.175 (0.66)	-0.109 (0.33)
6	Own Land	0.253 (1.73)***	—	-0.237 (0.73)	-0.143 (0.73)
7	Non Farm Assets	0.005 (0.22)	-0.197 (1.73)***	-0.081 (0.55)	0.088 (0.95)
8	Family Income	—	-0.04 (0.43)	0.239 (0.34)	—
Log likelihood		-20.975	-14.826	-18.048	-18.241
R ²		0.161	0.325	0.179	0.170
Probability		0.231	0.026	0.248	0.187
No. Observation		50	50	50	50

Note: Figures in parentheses indicates 't' values

***, **, * Indicates 10 per cent, 5 per cent and 1 per cent significant levels.

It reveals that the probability to involve in lease contract is high if the farmer has better economic condition¹. In sugarcane crop in AP, after dropping one variable (asset position), the income and own land show positive association and are statistically significant at 10 and 5 per cent levels. It tells that the probability of lease contract may change if farmer possesses better income and large size of lands. Similarly, in groundnut crop in AP, co-efficients of own land and non-farm assets show positive association with dependant variable and are statistically significant at 10 and 1 per cent level. On the contrary, in cashew nut crop in AP, the co-efficients of working population, non-farm asset and family income give expected signs and asset position shows negative association with dependant variable and are statistically significant at 10 per cent level. It implies that the probability of lease contract may change if the farmer tenant possesses lower asset position.

A similar analysis for Tamil Nadu reveals that the lease contracts are very inconsequential and imperfect. The results shown in table. 6 reveals that the level of education and own land give expected signs and are statistically significant at 10 per cent level. The results disclose that the probability of lease transactions are less if the farmer tenant is more educated or a big landowner. In the same way, for the sugarcane crop, education and non-farm assets have the expected signs and are statistically significant at 10 per cent and 5 per cent level respectively. However, the caste variable is associated positively and significant at 10 per cent level where the probability to involve in lease contract is high for SC/ST communities when compared to other castes. The other coefficients of literacy and non-farm assets reveal a negative association with the dependent variable and are statistically significant at 5 and 10 per cent level. Similarly, in dry crops of groundnut and cashew nut, after dropping one variable (Caste in GN and Age in CN), only the coefficient of literacy becomes statistically significant at 10 per cent level and shows negative association with the dependant variable.

AGRARIAN RELATIONS

The terms and conditions of tenancy have important implications for the development of agrarian relations between the landlords and tenants². The terms of tenancy in any case will depend upon the conditions of demand and supply in the lease market. The demand for land is related to the extent of idle family labour with the tenant household and the terms of tenancy. The supply of land depends upon the method of cultivation and the ground rent in relation to the marginal product of investment through direct cultivation. A plethora of literature is available on the institutional tenancy, particularly on the issues pertaining to relative efficiency of different tenurial arrangements. To determine the structure of relations, we consider the nature of tenancy; contract duration and decision-making as key dimensions to elucidate the relations.

NATURE OF TENANCY CONTRACTS

In the burgeoning neo-classical literature on tenancy, the major focus has been on the persistence of sharecropping and its static-allocational implications for production efficiency (Srivastava, 2000, Deogharia 2009).

⁵ If the lessee has better economic position to invest on the leased farm, he may take more lease land and improve his economic power. On the other hand, if the lessor possesses better financial status, he may lease out his land and enter the non-farm activity.

⁶ Also see Taslim, M.A, 1988, Bell and Srinivasan, 1989, Chadha and Bhaumic, 1992, Mohapatra, 1994).

The existence of share cropping has been explained on the basis of a combination of more than one factor which includes risk-sharing, incentive effect, asymmetric information and transaction cost. Historically, in the lease market in agriculture, the landowners supplying lands are too few and the prospective tenants demanding lands are too many. However, the implementation of advanced technology in recent years brings elevated discrepancy between the supply and demand for lease market and nature of contracts which we find in the table below.

Table 7, Distribution of Nature of Tenancy

	Andhra Pradesh					Tamil Nadu				
	P	SC	GN	CN	Total	P	SC	GN	CN	Total
Fixed Cash	—	18 (81.8)	06 (50.0)	—	24 (35.8)	—	03 (33.3)	06 (75.0)	07 (100)	16 (48.5)
Fixed Kind	29 (100)	4 (18.18)	02 (16.7)	—	35 (52.2)	09 (100)	01 (11.1)	02 (25.0)	—	12 (36.3)
Share Crop	—	—	04 (33.3)	—	4 (6.0)	—	—	—	—	—
UMO	—	—	—	04 (100)	4 (6.0)	—	05 (55.6)	—	—	5 (15.1)
Total	29 (100)	22 (100)	12 (100)	04 (100)	67 (100)	09 (100)	09 (100)	08 (100)	07 (100)	33 (100)

Source: Field Survey 2003-04, Figures in parentheses indicates percentages.

Note: UMO- Usufractory Mortgage and Other terms.

P: Paddy, SC: Sugarcane, GN: Groundnut, CN: Cashew Nut.

In selected crops, all the land lease contracts are oral agreements. The rent of farm and the basis of its determination have been the subject of considerable empirical literature. In our sample villages, the extent and terms of leasing are shown in table.7. It is shown that the fixed rent contract is certainly the more dominant mode than sharecropping which is relatively declining in all crop villages in recent years (Haque, 1987). In paddy and sugarcane crops in AP, fixed kind and fixed cash payment, respectively¹, are predominant modes. In TN, fixed rent in paddy crop and usufractory mortgage in sugarcane crop are dominant modes of rental forms when compared to others (Srivastava, 1989). In fact, for the dry crops of groundnut and cashew nut, the fixed cash payment is a more dominant form, when compared to sharecropping. It has been observed in groundnut crop in AP, that the relative importance of sharecropping is declining and the lessors migrate to urban areas for non-farm activities. However, in cashew nut crop, the nature of lease and the terms of contracts are different as compared to other crops and the *Reverse Tenancy*¹ exists and small farmers lease-out their small lands to big landlords at stipulated time and start getting rent prior to crop cultivation. It has to be stated that the changing cropping pattern, technology innovations, land reforms and tenancy legislation and rapid urbanization in rural areas have changed agrarian relations. The lessor might prepare sharecropping contracts as these strikes a compromise between incentive and insurance.

¹ It has been observed during the survey, if the tenant will be able to repay the rent before cultivation, he can save Rs. 2000 as interest rate for principal rent.

However, fixed rental contracts give the tenant a higher stake of production and hence provide stronger effort incentives by taking the surplus product after paying the rent.

DURATION OF CONTRACTS

Contract duration which is an important and determining factor to improve the relationship between lessor-lessee regulates most economic transactions. The landlords who face higher monitoring and renegotiation costs, namely female and aristocratic landlords, are much less likely to be daily in the fields to choose the contract combinations of long term and fixed rentals. These landlords are not likely to ever want to resume direct cultivation and hence place less value on the flexibility given by short-term contracts. It is important to note that the length variable measures the duration of the contracts which does not coincide with the landlord and tenant. An analysis of contract duration across the crops and farm size distribution is shown in table A.1. The Table reveals that the duration of contracts in Paddy crop is almost in a short-run basis both in AP and TN. The marginal and small farmers predominate in lease contracts and accept short-term contract and yearly renewal. On the contrary, in sugarcane crop, lease contracts are long-term and the minimum contract duration of the crop is two years for plant season and root (Maradam) seasons. Similarly, in dry crop of groundnut in both AP and TN regions, the contract duration is short term where the crop uncertainty is higher compared to other wet crops rarely tenants renew their contract by their dependency ratio. In cashew nut crop, all contracts are long-run in AP when compared to year base renewals in TN. Similarly, the analysis of contract duration in lease-out contracts is shown in Table A.2. It is similar to lease-in contracts. In both the subsistence crops, short-run contracts exists predominantly and it is long-run in the case of commercial crops, with both AP and TN depending on the demand for the tenancy and other socio-economical conditions (Bandiera, Oriana 1999). The evidences of the above analysis indicate that long-term contracts are used for commercial crop where tenants are well off when compared to that for subsistence crops. The use of high powered incentives for contracts is always used for commercial crop which are more sensitive to investment. Moreover, the poor tenants are less likely to be offered with high powered incentives, which is suggestive of the fact that the credit market imperfection combined with either risk aversion or limited liability make incentive provision costly.

DECISION MAKING

Decision-making by the cultivator is an important determinant to improve the agrarian relations between the landlord and tenant. What crops to be grown, what type of seeds to be sown and how much of seeds to be used, what type and how much inputs to use, how much labour to utilize are the major indicators in the process of decision making table. A 4 indicates that, individual decisions are dominant when compared to combined decision. In fixed rental contracts, the tenant is the main decision maker having high power to take decisions. Some tenants taking suggestions from their landowners which are not compulsive to implementation on his crop. The participation in decision-making varies across the crops, both in AP and TN. In paddy crop in AP, about 76 per cent of tenants have full power in decision making when compared to 24 per cent tenants who share with their

¹Reverse Tenancy reveals that the marginal and small farmers lease-out their small piece of lands and are not willing to bear the cost of cultivation. See Iqbal Singh 1989.

landlords whenever they face a quandary in production process. Similarly, in the commercial crops of sugarcane and cashew nut, three-fourths of tenants have decision power when compared to 50 per cent in groundnut village. In Tamil Nadu, tenants have more power in decision making. The above analysis reveals that decision-making depends mainly on the nature of contract and other social relations maintained by tenants and landlords. It may be disclosed that the tenant is the main decision maker in which the term of contract is fixed (Srivastava, 1989, Smita, 2001).

CONCLUSION

The analysis of land and lease contracts and agrarian relations between the lessor and lessees in selected crops reveals that the land distribution across the size groups is highly disproportionate. Extent of lease contracts is high in wet crop regions when compared to dry crops in AP and almost inactive in TN. All the lease contracts are oral agreements and the nature of contract is fixed. In absolute terms, the rental payments are high in wet crop regions when compared with percentages in dry crops. In sugarcane crop in AP, interestingly, if the tenant is able to pay rent before operating the land, he can pay lower rent compared to the rent that he might pay after harvest. Fixed rent, long-term contracts and individual decision making give more incentives and unobservable efforts in the tenancy market.

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Appendix

Table A1, Duration of Contract of Lease - in Market of Wet Crops

	Andhra Pradesh			Tamil Nadu			
	Paddy		Sugarcane	Paddy		Sugarcane	
Contracts	One Year	> OneYear	>TwoYears	One Crop	One Year	One year	>Two years
Marginal Farmer	7	3	7	1	—	1	4
Small Farmer	5	—	2	2	1	—	1
Medium Farmer	—	—	2	—	3	—	—
Large Farmer	—	—	—	—	1	—	—
All	12	3	11	3	4	1	5

Source Field Survey 2003-04

Table A2, Duration of Contract of Lease - in Market of Dry Crops

	Andhra Pradesh			Tamil Nadu			
	Cashew	Groundnut	Cashew				
Contracts	One year	>one year	>Two Years	One year	>one year	One year	>two Year
Marginal Farmer	2	4	—	4	2	1	2
Small Farmer	2	—	3	—	—	2	—
Medium Farmer	1	—	—	1	—	1	—
Large Farmer	1	—	1	—	—	—	—
All	6	4	4	5	2	4	2

Source: Field Survey 2003-04

Table A3, Duration of Contract of Lease-out Market in Andhra Pradesh

	Paddy		Sugarcane	
Contracts	One Year	> One Year	One Year	>Two Year
Marginal Farmer	2	1	1	3
Small Farmer	1	1	1	—
Medium Farmer	2	2	1	2
Large Farmer	3	2	—	2
All	8	6	2	7

Source: Field Survey 2003-04.

Table A4, Distribution and Nature of Decision Making in Selected Crops Villages

	Andhra Pradesh		Tamil Nadu				
Crops	Lessee only	Lessor only	Both	All	Lessee only	Both	All
Paddy	22 (75.9)	0	7 (24.1)	29 (100)	6 (66.7)	3 (33.3)	9 (100)
Sugarcane	18 (81.8)	0	4 (18.2)	22 (100)	7 (77.8)	2 (22.2)	9 (100)
Ground Nut	6 (50.0)	2 (16.7)	4 (33.3)	12 (100)	5 (62.5)	3 (37.5)	8 (100)
Cashew Nut	4 (100)	0	0	4 (100)	5 (71.4)	2 (28.6)	7 (100)
All Crops	50 (74.6)	2 (3.0)	15 (22.4)	67 (100)	23 (69.7)	10 (30.3)	33 (100)

Source: Field Survey, 2003-04, Figures in parentheses are percentages.