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Land, Labour and Credit Market Interlockings: A Study of Orissa Agriculture

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The land-lease practices under semi-feudal mode of production, especially in Eastern India, throw up some distinct features of the lessor-lessee relationships. Many lessors exercise exploitative relations with their lessees by tying in land-leases with the lessee's family labour, consumption loans to the lessee, and so on. This process of leasing is known as land-lease interlocking. The lease interlockings and the 'extra-economic coercion' of tenants emanating therefrom have been the subject of many theoretical and empirical researches in the recent past (Bhaduri, 1973; Bharadwaj and Das, 1975; Bardhan, 1980; Bardhan and Rudra, 1978, 1980, 1981; Bell and Srinivasan, 1989; Chadha and Bhaumik, 1992). One aspect which could not be adequately covered by these studies was the consequences of land-lease interlockings and the underlying tenants' exploitation on their production performance and economic conditions. The present paper makes a modest attempt to fill this gap.

I

METHODOLOGY

Our study is based on primary data collected both through purposive and random sampling methods. Two villages were chosen from Balasore district as representative of agriculturally progressive areas (endowed with a developed irrigation system) and two from Kalahandi district to represent agriculturally backward areas (with poor irrigation base), notionally at Orissa's own standards. From each of the selected villages, we chose 75 households on the basis of stratified random sampling; in total, the sample size was 300. The sample households were classified in two ways: (i) agrarian class (on the basis of land ownership status) and (ii) size class (on the basis of operational land status) of the cultivators. The study throws up a few important insights from the primary survey.

II

LAND-LEASE TRANSACTIONS

In Orissa agriculture, lessors belong to various sizes of land ownership. Pure lessors (rentier class) are insignificant in number. The big lessors generally prefer the landless and marginal cultivating households as their tenants. Through this arrangement, they seek to maximise the indirect exploitation of the tenant's family labour by interlinking land-leases with labour hiring. The above observation is in complete conformity with the findings of Bharadwaj and Das (1975).

The rate of rent is, at best, a partial consideration with the lessors to adjust the supply of lease; many other qualitative considerations also weigh with them. Cultivating households with lower economic status are obliged to enter the lease markets as tenants often under

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heavily onerous lease contracts. This is especially true for the landless, petty and marginal landowners since even a bit of additional land area provides additional employment to their family members. So, the incidence of tenancy is relatively higher in the marginal and small size classes of operators than in the larger size classes.

Pure tenants (nearly exclusively confined to marginal operators) are large in number in the irrigated villages compared with those in the unirrigated ones. Unlike the emergence of capitalist tenants reported from Punjab agriculture (Singh, 1985), there is still a preponderance of marginal and small cultivators as tenants even in the so-called agriculturally progressive areas of Orissa. Obviously, the progressiveness is only a notional concept whose absolute level does make a big difference in influencing agrarian relationships.

Caste elements do not seem to influence the lessor-lessee relationships. In many cases, even big lessors belong to the scheduled castes and backward castes while some small lessees belong to the higher castes such as Brahmin, Khatriya and Karana. It is striking to note that cultivators belonging to the higher castes do not mind to work as tenants to the lower caste lessors. Irrespective of caste, the economic necessity of a household is a formidable guide in its opting for leasing in and often for entering into interlocking lease arrangements. Murty (1987) also confirms the above tendency for Andhra Pradesh.

As regards the decisions on rent fixation, rent systems and various other related matters, the lessees play passive roles in sharp contrast to their prospective lessors. Unlike the rising spate of recorded tenancy in West Bengal in recent years (Chadha and Bhaumik, 1992), land-leases in Orissa are still mostly unrecorded. The possibility of eviction of the tenants at the free will of the lessors is still intact and rampant.

III

INTERLOCKED MARKETS

The interlocked structure of land-lease markets can be of four types: (i) land-labour interlocked markets,[1] (ii) land-credit interlocked markets,[2] (iii) land-labour-credit interlocked markets,[3] and (iv) land-lease market free of any interlocking.[4]

The incidence of interlocking[5] is much higher in the irrigated villages than in the unirrigated ones. In both types of areas, the incidence of land-labour interlocking is relatively higher compared with other types. The land-credit interlocking is on the verge of disappearance especially in areas of progressive agriculture. This observation is, by and large, in conformity with the findings of Bell and Srinivasan (1989). It is thus obvious that 'labour contract' most commonly intervenes in land-leasings to generate market interlockings.

The nature of lease contracts and the degree of exploitation of tenants under interlocking arrangements mainly depend on the relative economic status of the lessors and their lessees. The difference between the lessor and the lessee in terms of economic status is more pronounced in the irrigated villages than in the unirrigated ones. Perhaps, a greater economic inequality between the lessor and the lessee brings about a higher incidence of land-lease interlockings in the irrigated villages than in the unirrigated ones.

A tenant household once deciding to operate in an interlocked setting has to choose a particular set of lease arrangements. It mainly depends upon the tenant's resource constraints. A tenant household, endowed with a surplus of working hands, naturally opts

for 'labour contract'. Similarly, a tenant household seeking consumption loans in order to meet its deficit in routine expenditures very often prefers 'credit contract' with its lessor. Further, compared with an owner-cum-tenant operator, a pure tenant is mostly in favour of lease-labour interlockings because his objective is primarily to employ the surplus family labour.

In the above context, a triple mode of tenant exploitation is discernible in our study: (i) 'rental exploitation', (ii) 'remuneration exploitation' and (iii) 'usury exploitation'.[6] The 'rental exploitation' is a common mode that exists under all types of lease arrangements. The 'remuneration exploitation' is at higher rates in areas of progressive agriculture whereas both 'rental exploitation' and 'usury exploitation' operate at higher rates in the agriculturally backward region. There is a certain relationship between the rate of exploitation and the degree of interlockings. The incidence of lease-labour nexus is greater in the irrigated villages and lease-credit nexus is relatively greater in the unirrigated villages. Correspondingly, a relatively higher rate of 'remuneration exploitation' is observed in the irrigated villages than in the unirrigated ones. The reverse is true of 'usury exploitation'. In overall terms, the rate of exploitation of tenants is much greater in the land-labour-credit interlockings compared with that under any other form of interlocked lease arrangement.

IV

IMPACT OF INTERLOCKINGS

The major question that needs to be answered is whether the tenant's own cultivation is affected or not, whenever the family members of a tenant, under conditions of land-labour and land-labour-credit interlockings, are engaged for some days in the fields of their respective lessors, especially during the peak season. Again, whether the production performance of these tenants is affected or not, the tenant households operating under these interlocking lease arrangements are subjected to higher rates of exploitation. In what follows, some plausible answers are framed on the basis of a few important production parameters emanating from our field data.

Between interlocked tenants and free tenants, both in the irrigated and unirrigated villages, there are rarely significant differences in respect of average yield rates, average use of new inputs and the implicit family labour costs per acre cropped (Table I). Considering the value of average cropping intensity as a measure of land use efficiency, it turns out that the interlocked tenants are better than the free tenants. Similarly, if the production elasticities of new inputs and family labour in respect of interlocked tenants are compared with those of free tenants, the differences are statistically not significant, either in the irrigated or in the unirrigated villages (Table II(A) and II(B)).

It follows that firstly, both the categories of tenants, interlocked tenants and free tenants, are at the same footing in respect of land use, use of new inputs, application of own family labour and yield per acre. The interlocking lease arrangements do not seem to adversely affect their production performance. Secondly, it follows that although the tenants are obliged to supply some labour to their lessors under the interlocking contracts, yet they do not have to squeeze its application for their own cultivation.

TABLE I. DIFFERENCES IN YIELD RATE, LABOUR USE AND APPLICATION OF NEW INPUTS BETWEEN INTERLOCKED AND FREE-LEASE TENANT OPERATORS

(Rs.)

Category	Yield per acre					New inputs per acre					Implicit family labour cost per acre				
	Difference between					Difference between					Difference between				
	L-L	L-L-C	F	2-4	3-4	L-L	L-L-C	F	7-9	8-9	L-L	L-L-C	F	12-14	13-14
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Irrigated villages															
A. Advanced region	2,550.0	2,651.0	2,971.0	-421.0	-320.0	251.0	215.0	269.0	-18.0	-54.0	303.0	189.0	231.0	72.0	-42.0
				(-0.607)	(-0.275)				(-0.140)	(-0.412)				(0.632)	(-0.300)
B. Backward region	2,223.0	2,914.0	2,144.0	79.0	770.0	164.0	259.0	120.0	44.0	139.0	369.0	329.0	327.0	42.0	2.0
				(0.070)	(0.746)				(0.219)	(0.793)				(0.227)	(0.008)
Unirrigated villages															
A. Advanced region	2,197.0	1,750.0	2,013.0	184.0	-263.0	56.0	63.0	98.0	-42.0	-35.0	348.0	203.0	252.0	96.0	-49.0
				(0.195)	(-0.306)				(-0.510)	(-0.466)				(0.687)	(-0.516)
B. Backward region	1,468.0	1,865.0	1,364.0	104.0	501.0	31.0	53.0	13.0	18.0	40.0	244.0	397.0	234.0	10.0	163.0
				(0.245)	(1.141)				(0.487)	(1.151)				(0.089)	(1.457)

Notes: L-L = Land-labour interlocked markets.

L-L-C = Land-labour-credit interlocked markets.

F = Free-lease market.

Figures in parentheses are t-values of mean differences.

TABLE II(A). DIFFERENCES OF PRODUCTION ELASTICITIES OF NEW INPUTS AND FAMILY LABOUR BETWEEN INTERLOCKED AND FREE TENANTS WITH IRRIGATION STATUS

Category	bki	bkf	Difference between bki and bkf	bli	blf	Difference between bli and blf
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Unirrigated villages	0.18755**	0.15626**	0.031286	-0.03015	0.01564	-0.045787
nk = 34 nf = 26	(10.3808)	(8.1185)	(1.68340)	(-0.2838)	(0.17886)	(-0.46476)
Irrigated villages	0.14649**	0.13957**	0.006928	0.02904	0.10645	-0.07741
nk = 47 nf = 19	(6.5677)	(5.0799)	(0.28980)	(0.2621)	(0.9414)	(-0.69449)
Sample villages	0.17762**	0.14263**	0.034984*	0.04189	0.09185	-0.049952
taken together	(14.1662)	(8.4045)	(2.4500)	(0.5724)	(1.2290)	(-0.67733)
nk = 81 nf = 45						

Notes: nk = Sample size for the interlocked tenants.
nf = Sample size for the free tenants.
bki = Production elasticity of new inputs for the interlocked tenants.
bkf = Production elasticity of new inputs for the free tenants.
bli = Production elasticity of family labour for the interlocked tenants.
blf = Production elasticity of family labour for the free tenants.
** Significant at 0.01 level.
* Significant at 0.05 level.
Figures in parentheses are t-values.

TABLE II(B). DIFFERENCES OF PRODUCTION ELASTICITIES OF NEW INPUTS AND FAMILY LABOUR BETWEEN LAND-LABOUR INTERLOCKED AND FREE TENANCY AND BETWEEN LAND-LABOUR-CREDIT INTERLOCKED AND FREE TENANCY

Production elasticity	L - L (n = 45)	L - L - C (n = 24)	F (n = 45)	Difference between L-L and F	Difference between L-L-C and F
(1)	(2)	(3)	(4)	(5)	(6)
bk	0.167959**	0.180609**	0.142632**	0.025327	0.037977
	(9.36278)	(6.708104)	(8.4045)	(1.45049)	(1.81050)
bl	0.052622	-0.004494	0.091847	-0.039225	-0.096341
	(0.46723)	(-0.036407)	(1.2290)	(-0.410436)	(-1.018802)

Notes: bk = Production elasticity of new inputs.
bl = Production elasticity of family labour.
L-L = Land-labour interlocked markets.
L-L-C = Land-labour-credit interlocked markets.
F = Lease market free of any interlocking.
** Significant at 0.01 level.
Figures in parentheses are t-values.

V

ECONOMIC STATUS OF TENANTS

As regards the economic conditions of the tenant operators (Table III), it may be noted that per capita income and per capita routine consumption expenditure of the interlocked tenant households are relatively much lower than those of untied tenants. Further, the incidence of poverty is relatively much higher for the interlocked tenants (Table III). A few crucial facts are: firstly, whenever the tenant operators switch over from unirrigated to irrigated agriculture, their economic status improves impressively. Secondly, whenever interlocking is broken, the economic condition of tenants improves a lot. Thirdly, whenever a switch-over takes place from unirrigated to irrigated agriculture, the group of interlocked tenants would gain more than the free tenants because the former compared to the latter are

TABLE III. ECONOMIC STATUS OF THE INTERLOCKED AND FREE TENANTS

Particulars	Unirrigated villages		Irrigated villages		All sample villages	
	Interlocked tenant (34)*	Free tenant (26)	Interlocked tenant (47)*	Free tenant (19)	Interlocked tenant (81)*	Free tenant (45)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Per capita income (Rs.)	802.0	955.0	1,141.0	1,520.0	991.0	1,212.0
Per capita expenditure (Rs.)	808.0	940.0	659.0	1,170.0	916.0	1,045.0
Per cent of tenant households below the poverty line	91.18	69.23	65.96	52.63	76.54	62.22

* Figures in parentheses are the size of the sample.

very prompt in making up their economic position especially under irrigated agriculture in which many among them could cross the poverty line. Lastly, collating the rates of exploitation of tenants with their economic status, we do not find any concrete relationship between these two variables.

VI

CONCLUSION

The practices of tenancy cultivation cannot be stopped from practical stand-point. It should, however, be feasible to eliminate the interlocking elements by strengthening the process of social networks and infrastructures for agriculture. Although the concept of 'exploitation' of tenants has its real implication in the land-lease interlockings in Orissa agriculture, yet its adversities on tenants' productions and incomes are not very clearly discernible in our study. The economic status of tenant cultivators can be improved by providing them adequate irrigation facilities along with regulated tenancy operations.

NOTES

1. The lessor leases out land to the lessee on the condition that the lessee's family would supply labour to the lessor.
2. Wherever the lease is tied with credit transactions between the lessee and the lessor.
3. The lessor leases out land to the lessee on the condition that the lessee's family would supply labour to the lessor and the lessor would sanction consumption loan to the lessee.
4. The lease is not interlocked by any specified factor market.
5. The incidence of land-lease interlocking is defined as the percentage of tenant households operating under interlocking arrangements.
6. 'Rental exploitation' is defined as extra-economic coercion on the tenant by his lessor in terms of excess rental charges, 'remuneration exploitation' in terms of underwages to the tenant's family labour by his lessor, and 'usury exploitation' in terms of excess interest charged by the lessor on the lessee's consumption loans.

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