

## Agricultural Tenancy in Semi-arid Tropical India

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The temporary transfer of land via tenancy is one of the oldest of the institutional devices that have evolved to facilitate adjustments in agricultural factor markets. However, one of the side effects of the adjustment process, resulting mainly from the unequal position of landlords and tenants, has been the possible exploitation of tenants. Consequently, as in India prior to independence, tenancy has largely been viewed as an instrument of exploitation of the weak. For this reason, regulation of tenancy became a key objective in postindependence India. The regulatory measures, along with the fast-declining land/man ratio and the technological improvements in agriculture, have considerably transformed the objective circumstances under which tenancy now operates in that country.<sup>1</sup>

Tenancy seems to have acquired new reasons for existence and varied forms. This has drawn attention to the need for a fresh and closer look at agricultural tenancy, especially as a means of adjustment, and at interlinked operations in agricultural factor markets (P. K. Bardhan 1978a, Srinivasan 1978). However, despite the strong desire of scholars to document the extent and forms of tenancy and despite the availability of theoretical models that attempt to establish the rationale for agricultural tenancy, efforts directed to the study of tenancy per se usually do not succeed. Because of the great

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1. For documentation and analysis of tenancy in India in recent years, see Vyas (1970), Khuro (1973), Rao (1972), Rao (1975), Joshi (1975), P. K. Bardhan (1976b), Sanyal (1978), Bardhan and Rudra (1978).

capacity of farmers to hide it, agricultural tenancy simply disappears once researchers start investigating it in the usual one- or two-round surveys. Because of its very sensitive nature, the subject calls for greater emphasis on participant observation over a longer period.

In this paper I discuss some dimensions of agricultural tenancy in three agroclimatic zones in semi-arid tropical India. The paper is based on fairly continuous observation of and intensive interaction with rural households for a period of three to four years. The details presented here complement the information presented by two accompanying papers in this volume, those by Binswanger et al. (chapter 8) and by Ryan and Ghodake (chapter 9), which discuss different facets of the agricultural labor market in the same areas and which are also based on the same ICRISAT village-level studies (VLS).

### THE ICRISAT VILLAGE-LEVEL STUDIES

All three papers focus on six villages in three areas: Aurepalle and Dokur in the Mahbubnagar district of Andhra Pradesh, Shirapur and Kalman in the Sholapur district of Maharashtra, and Kanzara and Kinkhedra in the Akola district of Maharashtra. The three districts represent distinct climatological, agronomic, and social and economic zones of the semi-arid tropics of India.

As part of the ongoing VLS, data have been collected from a randomly selected panel of 240 households at intervals of 20 to 40 days since May 1975. The panels in each village consist of 30 farm households and 10 labor households. (The latter include land operators with less than 0.2 hectares of operated area.) Data have been collected on a broad spectrum of socio-economic and agrobiological characteristics by resident investigators who have a rural background and a master's degree in agricultural economics and who belong to the same linguistic group as the farmers. Data collection is supervised by economists of ICRISAT center.

The agroclimatic characteristics of the regions and the villages are summarized in table 5.1. Mahbubnagar is a region of medium to shallow Alfisols (red soils with relatively high aluminum and ferrie content) with an average medium to low annual rainfall of 710 mm, which is fairly erratic. The present Mahbubnagar district was part of the dominions of the nizams of Hyderabad from the later seventeenth century, when the dynasty of this feudal ruler was established in this part of south central India, to 1949, when Hyderabad State was absorbed by independent India.<sup>2</sup> Although dry, the district has long supported a considerable amount of rice cultivation, based on irrigation from numerous runoff collection reservoirs, or tanks, and from

<sup>2</sup> Historical articles on the following regions can be found in the *Regional Gazetteers of India*, 1907-09: Akola district (vol. 5), Akola town (vol. 3), Bejapur, in Hyderabad State (vol. 13), Mahbubnagar district (vol. 12), Murizapur, Taluk (vol. 11), Nizam district (vol. 22), and Sholapur town (vol. 22).

contractual arrangements, employment and wages in rural labor markets. These papers presented at the ADC/ICRISAT Conference, 22-24 Aug. 1979, Hyderabad, India.

TABLE 5.1. Agroclimatic Characteristics of Six Indian Villages

Village	District	State	Rainfall		Soil Type	Irrigation percent <sup>a</sup>	Farm-size Group <sup>b</sup>		
			Annual Average (mm)	Variability CV <sup>c</sup> percent			Small (ha)	Medium (ha)	Large (ha)
Kanzara	Akola	Maharashtra	820	27	Medium-deep Vertisols	4.9	0.21-2.25	2.26-5.00	>5.00
Kinkheda	Akola	Maharashtra	820	27	Medium-deep Vertisols	3.8	0.21-2.00	3.01-5.80	>5.80
Kaiman	Sholapur	Maharashtra	690	29	Deep and medium- deep Vertisols	10.4	0.21-6.90	6.01-10.75	>10.75
Shrapur	Sholapur	Maharashtra	690	29	Deep Vertisols	13.3	0.21-2.80	2.81-6.00	>6.00
Aurepalle	Marathwada	Andhra Pradesh	710	28	Shallow and medium- deep Alfisols	21.0	0.21-3.80	3.81-5.25	>5.25
Dokar	Mahbubnagar	Andhra Pradesh	710	28	Shallow and medium- deep Alfisols	60.1	0.21-3.90	3.91-10.00	>10.00

Note: ICRI SAT has been conducting studies in these six villages since May 1975 (Jodha et al. 1977).

<sup>a</sup>Gross irrigated area as proportion of gross cropped area (average of three years).

<sup>b</sup>On the basis of operational landholding.

wells. Tank building, as a means to assure a water supply for rice cultivation, has for centuries been an important activity of kings and other rulers in the upland, semiarid granitic areas of what are now western Andhra Pradesh and western Tamil Nadu.

Sholapur has a mixture of deep Vertisols (black cotton soils) with very high moisture retention capacity; the annual average rainfall is 690 mm. While the amount of rainfall is similar to that in Mahbubnagar, the rainfall is much more erratic in Sholapur, especially within each year (not reflected in the coefficient of variation of annual rainfall), so Sholapur is agriculturally the least prosperous of the three districts.

The area forming most of the present Sholapur district was captured from the nizams by the Marathas in 1795. Between 1818 and 1848, the British gradually wrested control from the Marathas. A British collectorate was established in 1838. Under the British, Sholapur city was developed as a cotton-milling center. In 1903-04 there were three cotton mills in the city, employing a total of 5,239 people. The population of Sholapur city was 61,281 in 1881; by 1901 it had risen to 75,288. The population of the district as a whole was 720,977 in 1901. This area has experienced drought and scarcity for most of its history; periodic famines and public works projects to relieve them were reported well before the study period. During periods of drought in the late nineteenth century, large numbers were reported as employed in relief works: 95,617 in January 1877 and 156,000 in April 1900. In 1900 most land in Sholapur was freehold.

The Akola district is agriculturally the most prosperous area with a higher and more assured rainfall (820 mm year) than the other two districts. It has primarily medium to deep Vertisols. The present Akola district formed part of Berar in the nizams' dominions in 1853, when it was assigned to the British in payment for a loan. In 1900 most land was freehold. The district had been heavily cultivated and had been famous for its cotton for a long time before that. During the second half of the nineteenth century, demand for Indian cotton increased following the reduction in the amount supplied by the United States during the Civil War. Between 1867 and 1881 and after the installation of a railway, the cultivated area in Akola increased 50 percent and revenue increased 42 percent. In 1901 Murtizapur, the *taluk* or sub-district headquarters near the study villages of Kanzara and Kinkheda, had seven cotton presses and ten ginning factories.

Other aspects of the selected villages and households are discussed in Jodha, Asokan, and Ryan (1977) and Binswanger et al. (1977). Here we note that Mahbubnagar and Sholapur are high-risk areas because of their shallow soils (Mahbubnagar) and very unreliable rainfall (Sholapur). Akola is an assured rainfall zone where farmers face much lower yield risks.

Detailed information on tenancy did not begin to be collected until 1977, two years after fieldwork began in the villages (Mun. 1978) and it pertained

to the ownership status of each plot. The initial concealment of tenancy plots disappeared over time. Collection of input-output data that were later cross-checked with data on household transactions and bullock and labor utilization included in schedules further helped to reveal not only tenancy transactions but also their terms and conditions.

All plots resulting from land transfers between households via tenancy agreements as well as from sale, purchase, gift donation, or succession during the first four years of the VLS (with the exception of Kalman and Kinkheda, where only three years of data were used) were first listed. Separate interviews to collect additional data about those plots were conducted in the third and fourth years of fieldwork. Information from both parties to the land transfer was collected even if one of the parties was not a panel respondent of the VLS. The data relate to their resource endowments and the terms, conditions, and background of the transaction. The quantitative information was supplemented by investigators' personal observations and the author's own field notes.

## RESULTS AND DISCUSSION

I first examine the importance of tenancy transactions in the total land transfer. The rest of the discussion is devoted to tenancy only: the partners in tenancy transactions; terms and conditions of leases (including period of lease); the reasons given by farmers for lease transactions; resource adjustment; and interlinking of factor markets. Finally, the reasons for leasing are verified by comparison with other data.

### The Tenancy-dominated Land Market

Table 5.2 presents the new land transfers occurring during the four years via leasing in, leasing out, return of land because of termination of earlier leases, sale, purchase, gift donation, succession, or property division in which at least one party was a VLS panel respondent.

In these villages every year, 14 to 46 percent of the operated area of the sample households was temporarily or permanently changing hands through new land transfers of the different types. Furthermore, 77 to 97 percent of new land transfers were tenancy transactions only. This confirms the fact that in Indian villages the land market operates largely through tenancy rather than through outright sale or purchase (Bardhan and Rudra 1978).<sup>3</sup>

3. Ownership of land is one of the biggest sources of security in the villages. No one wants to sell land unless forced to. During periodic crises such as droughts and floods, farmers prefer to mortgage or lease out the land in the hope of getting it back at some future time. If they fail to regain the land, the leased or mortgaged land is sold or purchased (Jodha 1978, see also Rao 1972).

TABLE 5.2. Percentage Distribution of Total (New) Land Transfers by Type of Transaction in Six Indian Villages, 1973-76 and 1978-79

Village	Transferred Area ha <sup>a</sup>	Tenancy <sup>b</sup>	Type of Transaction	
			Sale/Purchase	Other <sup>c</sup>
Kanzara	117.6 (16)	92	0	8
Kinkheda	87.3 (15)	96	2	2
Kalman	257.9 (36)	97	1	2
Shrapur	416.0 (46)	90	6	4
Aurepalle	64.3 (14)	89	10	1
Dokur	80.5 (20)	77	20	3

Notes: <sup>a</sup>Based on the data from 240 panel households and their partners in land transactions in the six villages. Data for Kalman and Kinkheda are for the three years only.

<sup>b</sup>Includes all land transactions in which at least one of the parties was a panel household. Figures in parentheses indicate the transferred land area transferred/operated area per year as percentage of total operated area of sample households.

<sup>c</sup>Includes all land transfers resulting from leasing in and leasing out of land and termination of previous leases. Leased-in and leased-out lands for which lease arrangements already existed at the beginning of fieldwork have been excluded.

<sup>d</sup>Includes all land transfers resulting from gift donation, succession, and enactment of land reform laws.

Thus it is appropriate to study the land market and its functioning largely in terms of tenancy.

The intervillage differences in the extent of land transfers were largely a result of differences in the extent of tenancy. The larger area under tenancy in the Sholapur villages was caused by the delayed impact of a prolonged drought of 1971-72 and 1973-74, during which the majority of farmers lost their bullocks and other assets and failed to recoup them in subsequent years (Jodha 1978, Jodha, Asokan, and Ryan 1977). In the highly irrigated village of Dokur (Mahbubnagar), the practice of leasing land on a seasonal basis (twice a year) was responsible for the high extent of tenancy relative to the other village (Aurepalle) in the same district.<sup>4</sup> Both irrigation and drought seem to necessitate periodic resource adjustments, which are partly achieved through tenancy.

4. One of the reasons for the low extent of tenancy in 1978-79 in the land transfer in Aurepalle was the extent of absentee landlordism. The majority of landlords resided 2-3 years, and no new land transfers resulting from termination of tenancy existed.

## Partners in Land Tenancy

The following discussion concerns different aspects of all the land transactions resulting from tenancy—those existing at the beginning of the fieldwork as well as those taking place during three or four years of fieldwork. The land transfers resulting from termination of previous leases are excluded in the remainder of the analysis.

Table 5.3 presents the shares of different farm-size groups<sup>5</sup> in the total land leased in and leased out. Contrary to the conventional belief that a tenant is invariably a small farmer or a landless laborer being exploited by a landlord with a large holding, table 5.3 reveals that large farmers also leased in and small farmers also leased out substantial areas of land. In four out of six villages, the large farmers got the largest share (from 42 to 69 percent) of total area leased in. Only in one village (Kinkheda) did small farmers receive the largest share of leased-in land. On the other hand, of the total land leased out, large farmers contributed the largest share only in two villages; the bulk of the land leased out belonged to small and medium farmers. The implications of this for policy planning are discussed in the last section.<sup>6</sup>

## Concentration of Land

The data about partnership in land leasing are presented in a different form in table 5.4.<sup>7</sup> There was considerable transfer of land within the same farm-size groups. Between approximately 30 and 60 percent of land transfers fell into this category (sum of columns 1 and 2). In two out of six villages the largest share of area leased was transacted among the large farmers them-

5. For the definition of farm-size groups, see table 5.1.

6. The large-scale emergence of the large farmer as a tenant seems to be a rather recent phenomenon in India and appears to have developed as an adjustment to land reform laws that attempt to reduce and restrict the growth of ownership holdings but not of operational holdings that include leased land. In some areas, technology based on high-yielding varieties (Vyas 1970) and rapid tractorization (Jodha 1974) have also induced large farmers to lease in land in place of leasing out, as they did in the past. No extensive data on this dynamic aspect of tenancy could be collected in the study villages. However, some relevant details were gathered from (1) a small number of households that have been traditionally leasing in or leasing out land; and (2) village *patwaris* and other revenue officials at higher levels, most of whom had been witnesses to the changing agrarian situation in their areas. The data provided in these discussions (especially data from the *patwari* records) clearly confirm the recent trend toward land leasing by large farmers.

7. For the purpose of table 5.4, relative landholding positions of partners were considered. Accordingly, the land transfer from small farmer to medium farmer and the land transfer from medium or small farmer to large farmer were put in the same category. Similarly, land transferred from small farmer to landless laborer and from large farmer to medium farmer or to small farmer were put in the same category. Hence the "smaller" and "larger" categories of table 5.4 are different from the farm-size categories of table 5.1.

TABLE 5.3 Percentage Share of Different Farm-size Groups in Leased-In Land Areas in Six Indian Villages, 1975-76 and 1978-79

Village	Area Leased in %			Area Leased Out %		
	Small Farms	Medium Farms	Large Farms	Small Farms	Medium Farms	Large Farms
Kanzara	34	16	50	22	34	44
Kinkheda	56	30	14	31	27	42
Kalman	39	45	13	59	30	11
Shirapur	26*	17	57	59	19	20
Aurepalle	27	4	69	12	16	42
Dokur	17*	41	42	22	59	19

Notes: Based on data from the 240 panel households and their partners in tenancy transactions in the six villages. Data for Kalman and Kinkheda are for first three years only. Table includes all cases of leased-in and leased-out land of panel respondents that existed at the beginning of the fieldwork as well as new transactions that took place during the four years of fieldwork. This and subsequent tables in this chapter exclude the land transfers resulting from termination of leases. For definitions of farm-size groups, see table 5.1. Labor households that participated in tenancy transactions are included with small farmers.

\* Includes some initially landless labor households.

TABLE 5.4 Percentage Distribution of Leased-Out Land by Groups of Tenancy Partners in Six Indian Villages, 1975-76 and 1978-79

Village	Share of	Leased within the Same Farm-size Groups		Leased from Small to Larger Farmers		Leased from Larger to Smaller Farmers	
		Large Farms	Others	Large Farms	Others	Large Farms	Others
Kanzara	Area	29	17	24	30		
	Transactions	(20)	(27)	(25)	(28)		
Kinkheda	Area	12	31	8	47		
	Transactions	(8)	(37)	(13)	(42)		
Kalman	Area	0	33	43	24		
	Transactions	(0)	(33)	(46)	(15)		
Shirapur	Area	28	18	30	26		
	Transactions	(10)	(31)	(37)	(22)		
Aurepalle	Area	47	24	37	7		
	Transactions	(20)	(53)	(13)	(14)		
Dokur	Area	6	24	31	28		
	Transactions	(6)	(24)	(35)	(11)		

Notes: Based on data from the 240 panel households and their partners in tenancy transactions in the six villages. Data for Kalman and Kinkheda are for first three years only. Table includes all cases of leased-in and leased-out land of panel respondents that existed at the beginning of the fieldwork as well as new transactions that took place during the four years of fieldwork. Figures in parentheses are percentages of transactions covered by the respective categories; other figures are percentages of area covered. For definitions of farm-size groups, see table 5.1. Labor households that participated in tenancy transactions are included with small farmers.

selves. In four out of six villages, the proportion of land transfers from relatively smaller to relatively larger farmers was greater than vice versa whether one considers area or number of transactions. In other words, land was transferred from smaller operators to larger operators, which implies a modest tendency toward concentration of operational holdings.

Detailed discussions with farmers revealed that many small farmers prefer to lease out land to large farmers, who have a relatively better resource position and management capacity to ensure a higher rate of production and therefore a greater absolute share to the landowner of the gross production. The possibility of advance payments in cash or in kind to be adjusted against the crop share also induces smaller farmers to lease out the land to relatively larger ones. Also, when small landowners find it difficult to supplement their landholdings through leased land, they may decide to lease out their own land.

Furthermore, especially in Aurepalle, where absentee landlords are numerous, large farmers usually transact land within their own group because of increased political and legal awakening among the rural poor, who may take advantage of tenancy laws, thus creating problems for their landlords.

#### Period of Lease

Tenancy laws usually confer the ownership right to the actual tiller of leased-in land after he cultivates it for a specific period. Apprehension created by these laws was quite widespread and was not confined to large farmers. This was partly confirmed by the short period of lease of most of the transactions. To guard against the loss of land through long-term lease of land, landowners either tried to change tenants every year or tried to lease out the land to the same tenant on an annual basis. Table 5.5 shows that except for Aurepalle, 70 to 98 percent of the area (or 66 to 96 percent of the transactions) was leased out for one year or less. In the highly irrigated village of Dokur, the leases were mostly on a one-season basis. In Aurepalle, the pattern was different because of a greater proportion of absentee landlords (to be discussed in the next subsection). Close examination of the tenancy transactions based on a lease period of three years and more revealed that 52 percent of such transactions in all villages combined involved landowners who were absentee landlords. Another 37 percent of these transactions involved landowners who were relatively small farmers and had to lease out their land due to indebtedness to the tenant. (Alternatively, they worked as informally attached laborers to the tenant.) The remaining transactions based on long-term leases involved landowners who leased out land because of old age, disabilities, or kinship ties with tenants. Furthermore, most long-term tenancy transactions established a fixed rental payment as against crop-sharing

TABLE 5.5 Percentage Distribution of Leased-Out Land by Period of Lease in Six Indian Villages, 1975-76 and 1978-79

Period of Lease	Share of Area	Kanzara	Kinkheda	Kalman	Shivapur	Aurepalle	Dokur
1 year or less	Area	74	95	70	78	18	79
	Transactions	(85)	(96)	(66)	(95)	(40)	(78)
2 years	Area	19	Negligible	16	Negligible	72	6
	Transactions	(8)		(20)		(33)	(12)
3-5 years	Area	4	Negligible	0	Negligible	10	2
	Transactions	(3)		(8)		(26)	(2)
5-5 years	Area	Negligible	Negligible	8	Negligible	Negligible	8
	Transactions			(6)			(8)

Notes: Based on data from the 240 panel households and their partners in tenancy transactions in the six villages. Data for Kalman and Kinkheda are for first three years only. Table includes all cases of leased-in and leased-out land of panel respondents that existed at the beginning of the fieldwork as well as new transactions that took place during the four years of fieldwork. Figures in parentheses are percentages of transactions, as seen by the respective categories; other figures are percentages of area covered.

arrangements. This is quite understandable in view of the type of partners who conclude long-term leases.

#### Terms and Conditions of Leases

Other terms and conditions of the lease arrangements also showed considerable similarities among villages. Except in Aurepalle, and to only some extent in Kanzara, the proportion of land area under fixed rental agreements was not important. In Aurepalle more than 76 percent of the leased area had fixed rental arrangements, chiefly because of the large number of absentee landlords. (This was 73 percent of all lease transactions.) The phenomenon of absentee landlordism in Aurepalle can probably be attributed to (1) nearness of the village to the city of Hyderabad, to which most of these landowners, both small and large, have migrated, leaving land to reliable caretaker tenants who pay only nominal rent, and (2) the unique social structure of the village, which has given more power over all village transactions to large farmers than any other of the six villages (see also chapter 8).

Sharing of output by landowner and tenant was found to be the most common arrangement in all villages except Aurepalle. Between 77 and 99 percent of transactions were in this category. Table 5.6 presents the proportions of leased land as well as the proportions of lease transactions according to the share of tenant in input and output. In practically all the output-sharing cases, the tenant received 50 to 75 percent of gross output. However, the arrangements concerning sharing of inputs were not as clear-cut. Important variations occurred even within each agronomic zone. In Kinkheda,

TABLE 5.6 Percentage Distribution of Tenancy Land by Terms and Conditions in Six Indian Villages, 1975-76 and 1978-79

Village	Share of	Tenant's Share in Input (I)/Output (O)				
		Fixed Rental	I = 100 percent O = 50-75 percent	I = 50 percent O = 50 percent	I = 50-75 percent O = 50-75 percent	Total
Kanzara	Area	17	42	32	9	100
	Transactions	(23)	(33)	(31)	(13)	(100)
Kinkheda	Area	2	96	0	2	100
	Transactions	(4)	(92)		(4)	(100)
Kalman	Area	4	4	90	2	100
	Transactions	(7)	(6)	(81)	(6)	(100)
Shrapur	Area	1	96	1	2	100
	Transactions	(1)	(96)	(1)	(2)	(100)
Aurepalle	Area	76	19	0	5	100
	Transactions	(73)	(24)		(3)	(100)
Dokur	Area	3	0	94	3	100
	Transactions	(3)		(93)	(4)	(100)

Notes: Based on data from the 240 panel households and their partners in tenancy transactions in the six villages. Data for Kalman and Kinkheda are for first three years only. Table includes all cases of leased-in and leased-out land of panel respondents that existed at the beginning of the fieldwork as well as new transactions that took place during the four years of fieldwork. Figures in parentheses are the percentages of transactions covered by the respective categories; other figures are percentages of area covered.

for 96 percent of the leased area, the tenant carried all input costs, while in Kanzara this was true for only 42 percent of the leased area. There was a complete reversal in the Sholapur district; in Kalman 50 percent input sharing was practiced in 90 percent of the area, while in Shrapur this type of input sharing occurred only in 1 percent of the cases.

Detailed questioning of farmers, backed by actual observation, revealed the following. Under normal circumstances the tenant's share was 50 percent of both input and output. The tenant's share could rise to 75 percent or more if the leased-in land had soil problems and crop production entailed considerable risk. The tenant's share in output also increased above 50 percent if the landowner, especially if he was a small farmer, failed to provide the inputs (such as labor) agreed on in the lease. Such contingencies arose when small landowners out-migrated due to midseason drought; when other weather conditions compelled the landowners to concentrate first on self-cultivated plots - for example, on weeding at a critical time; or when unforeseen circumstances such as sickness or death of family workers or bullocks affected the landowner's resource position.

Thus the midseason contingencies requiring increased costs of cultivation for the tenant usually entitled him to a higher share in output according

to an informal and flexible pattern. These observations at the micro level are consistent with those of Roumasset (1979) at the macro level, across crops, in the Philippines.

The tenant's input share could exceed 50 percent if he had not compensated the landowner in other ways at the beginning of the deal. As observed particularly in the Sholapur villages (and in some of the Akola villages), some tenants (who were often larger landowners) provided advances or loans to the poorer landowners as a part of the tenancy transaction. The amount was adjusted against the landowner's share in the output at harvest time. If the full amount was not adjusted in one year because of a poor crop, the lease was renewed for the next year. The tenants who did not give such advances to the owners usually had to bear a higher proportion of the input costs.<sup>8</sup>

If the tenant decided to raise crops requiring costly inputs such as fertilizer or pesticides, the tenant's share in input as well as output increased accordingly. Owing to such input- or output sharing arrangements, tenancy did not discourage the adoption of improved technology. It was observed that crop choice was largely left to the tenant. However, where tenants (small landowners) depended on landowners for provision of input supplies and credit, crop choice was usually dictated by the landowner. A very limited number of such cases were observed in Kanzara, where farmers planted hybrid cotton in some plots and the sharing arrangements for different inputs differed.<sup>9</sup>

In the preceding paragraphs I have broadly described the normal pattern of input- and output-sharing arrangements in the six villages. The exceptions existed only where tenants were highly dependent on landowners and vice versa for different inputs and other provisions.

An analysis of the terms and conditions of tenancy in relation to farm size of tenants and landowners did not reveal any clear-cut differences that could be attributed to the unequal position of landowners and tenants, defined in terms of the pretenancy size of their operational holding.

Relative to the opportunities for factor ratio adjustments or for gains from interlinked transactions discussed below, formal terms and conditions of problems raised by them were not often mentioned as reasons for or against tenancy.<sup>10</sup>

8. Such advances, however, were not paid if lease transactions involved problems such that presented a greater risk in crop production.

9. For an analysis of sharing arrangements for plots requiring costly inputs, see Jha (1979).

10. This is partly suggested by the fact that we could detect only five cases where the formal terms and conditions (lease period, share in output and input) were cited as the reason for the breakup or reformation of tenant-landowner teams in the sample. Out of a total of forty-six cases where tenancy partnerships changed due to market forces, only three resulted from disputes over the formal terms and conditions.

TABLE 5.7. Percentage Distribution of Tenancy Transactions by Landowners' Reasons in Six Indian Villages, 1975-76 and 1978-79

Reason	Farm size	Village					
	Group	Kanzara	Kinkheda	Kalman	Shirapur	Aurepalle	Dokur
Resource adjustment	Small	71	40	40	62	10	50
	Medium	57	57	30	43	60	37
	Large	31	29	33	28	33	44
	Total	55	41	38	54	29	39
Interlocking of factor markets	Small	8	20	17	13	20	11
	Medium	7	0	40	8	0	13
	Large	0	0	34	11	44	22
	Total	6	8	21	15	7	12
Alternative earning opportunities	Small	12	10	3	10	7	33
	Medium	0	0	0	6	20	33
	Large	0	0	0	11	0	11
	Total	3	4	2	11	7	32
Traditional absentee landlordism	Small	0	10	3	3	30	0
	Medium	0	14	0	0	0	6
	Large	54	43	33	27	33	11
	Total	18	25	9	6	36	5
Other	Small	9	20	37	12	33	6
	Medium	36	29	30	35	20	6
	Large	15	28	13	28	0	22
	Total	18	22	30	14	21	15

Note: Based on details from the 240 sample households and their partners in tenancy transactions in the six villages. Data for Kalman and Kinkheda are for first three years only.

### Reasons for Leasing Land

Farmers revealed more than thirty specific reasons for leasing their land. For purposes of analysis, these reasons have been grouped in the following categories: (1) resource adjustments; (2) interlocking of factor markets; (3) alternative earning opportunities (a reason given by small landowners who leased out land); (4) traditional absentee landlordism; (5) miscellaneous reasons, including physical considerations such as distance of plots from the village and plots with problem soils that presented management and risk problems; and (6) social and kinship ties.

The percentage distribution of tenancy transactions and of the land area transacted were tabulated separately for tenants and for landowners. As there was no difference in the substantive conclusions suggested by the two tabulations, table 5.7 classifies transactions only by reason for leasing. Furthermore, the table gives the distribution of tenancy transactions by landowner's reasons only. Differences observed when the same transactions were analyzed according to tenants' reasons will be indicated below.

Except in Aurepalle, resource adjustment was the principal reason for the tenancy transactions, as I have stated, especially for small landowners.

If the availability of alternative earning opportunities is also viewed as a resource adjustment, the role of resource adjustments in tenancy transactions becomes even more significant.<sup>11</sup> If the miscellaneous category of reasons is disregarded, the next most important reason for owners to lease out land is that they are absentee landlords. This was, understandably, more important for large farmers. For small landowners, interlocking of factor markets was more important.

When the same data were analyzed according to the reasons for tenancy given by tenants, temporary out-migration and absentee landlordism evidently disappeared as reasons, the roles of resource adjustments and interlocking of factor markets were thus further strengthened.

### Resource Adjustment through Tenancy

To achieve optimum or fuller utilization of available resources such as family labor or bullocks, the farmer tries to hire different resources in or out. The extent to which this adjustment has been achieved through leasing of land is revealed by table 5.8, which presents the availability of land area per family laborer and per owned bullock both before and after the tenancy transaction for landowners and tenants. Only those cases are considered where resource adjustment was the main reason for tenancy. In four out of the six villages, tenancy did not tend to equalize the land-family labor ratios; on the contrary, it further widened the differences in the ratios in these villages.<sup>12</sup> This implies that tenancy transactions are not entered into primarily to adjust land availability with family labor availability. On the other hand, except for Aurepalle, land tenancy tended to equalize land/bullock ratios in these villages. If the fallow land is excluded from the analysis (figures in parentheses in table 5.8), the tendency toward equalization of land, bullock ratios between landowners and tenants is further strengthened. This supports the earlier findings reported by Bliss (1976). The fact that it is primarily the land, bullock ratios that are equalized and not the land/labor ratios suggests that the labor-hiring market operates more smoothly than the bullock-hiring market.<sup>13</sup>

11. With regard to the role of alternative earning opportunities in inducing particularly the small landholders to lease out their lands, it must be noted that in most cases these alternative opportunities are offered by rural work programs such as the Employment Guarantee Scheme. This is yet another example of the impact of public intervention on the operations of agricultural factor markets. For other examples, see chapter 8 and Joshi (1978).

12. An important limitation of table 5.8 is that it does not give any weight to irrigated land, which needs greater input of human and bullock labor. Of course, irrigated plots were important only in Dokur, but there, both tenant and landowner had irrigated lands prior to and after the lease transactions.

13. For more detail concerning the impact of factor market on factor proportions, see Ryan and Rathore (1978).

TABLE 5.8 Resource Adjustments through Land Tenancy in Six Indian Villages, 1975-76 and 1978-79 (in hectares)

Partner in Tenancy	Land Available per Family Worker		Land Available per Bullock	
	Before Transaction	After Transaction	Before Transaction	After Transaction*
<b>Kanzara</b>				
Landowner	2.6	1.9	9.5	7.2 (5.8)
Tenant	1.5	1.9	3.4	5.1
<b>Kinkheda</b>				
Landowner	3.1	2.1	7.7	5.0 (4.5)
Tenant	1.1	1.7	1.9	4.0
<b>Kalman</b>				
Landowner	1.7	0.9	18.3	5.5
Tenant	2.2	3.8	3.4	7.2 (5.8)
<b>Shrapur</b>				
Landowner	1.7	0.4	30.0	5.8
Tenant	1.0	1.9	4.4	8.2 (7.4)
<b>Aurepalle</b>				
Landowner	1.1	0.9	2.6	2.1
Tenant	3.1	3.9	3.7	9.8 (8.7)
<b>Dokur</b>				
Landowner	0.5	0.2	3.8	1.5
Tenant	0.6	0.8	1.2	1.6

Notes. Based on data from the 240 panel households and their partners in tenancy transactions in the six villages. Data for Kalman and Kinkheda are for first three years only. Table includes all cases of leased-in and leased-out land of panel respondents that existed at the beginning of the fieldwork, as well as new transactions that took place during the four years of fieldwork. It also includes details of all those landowners and tenants whose main reason for tenancy transaction was resource adjustment.

\* Figures in parentheses indicate the situation existing when fallow land is excluded from land availability per bullock.

### Interlinking of Factor Markets

Interlinking of factor markets in Indian agriculture is discussed by Bharadwaj (1974a), Bardhan and Rudra (1978), and others. In the present study the concentrated effort to determine interlinked transactions by analyzing different VLS schedules and conducting follow-up investigations led to the finding that between 6 and 21 percent of tenancy transactions can be regarded as "interlinked factor market operations." The definition of interlinked factor market operations was fairly broad and included all factor, product, and service market transactions between tenancy partners where tenancy was a direct or an indirect cause or effect of the transaction. The first row of table 5.9 repeats information on interlinking from table 5.7 and shows that interlinked transactions with tenancy were fairly important in the Sholapur district, followed by the Mahbubnagar district, but were negligible in the

TABLE 5.9 Percentage Distribution of Interlinked Transactions among the Partners in Tenancy in Six Indian Villages, 1975-76 and 1978-79

	Akola District		Sholapur District		Mahbubnagar District	
	Kanzara	Kinkheda	Kalman	Shrapur	Aurepalle	Dokur
Interlinked transactions as proportion of all tenancy transactions	6	8	21	17	18	12
Proportion of interlinked transactions involving						
Land lease + credit	6	5	43	37	8	7
Land lease + labor	18	13	13	9	15	21
Land lease + credit + labor	6	17	15	27	16	46
Land lease + marketing	47	40	8	16	11	7
Land lease + other	23	27	21	23	18	17
Proportion of all tenancy transactions involving labor commitments	1.5	7	6	11	11	6

Note. Based on data from the 240 panel households and their partners in tenancy transactions in the six villages. Data for Kalman and Kinkheda are for first three years only.

Akola district. The importance of different interlinked transactions differed from zone to zone. In Sholapur villages, for example, the land lease and the credit transactions were primarily linked. In these villages, contrary to the conventional pattern, the tenants gave loans to the landowners to get the land on lease. However, where old debts existed, the reverse was true, and in such cases lease of land, credit, and labor supply, through tied or untied labor, was sometimes simultaneously involved. In the Akola villages, the few interlinked transactions concerned primarily land lease, credit, and marketing. One of the reasons for this pattern was the public intervention in the form of the monopoly purchase of cotton by the Cotton Marketing Federation in Maharashtra, which, during the early years of our fieldwork, deferred payments and had other rigidities of operation. Small farmers with a limited holding capacity sometimes had to use large farmers as informal intermediaries to do their cotton marketing, a practice that led to interlinked tenancy credit and market transactions. In Mahbubnagar, land transactions were linked with a variety of miscellaneous transactions. Most of them concerned off-farm activities, procurement of inputs of services, supplies, and distribution of irrigation water.

Links between land lease and labor do occur but are not very common. From the first row and the third and fourth rows of table 5.9, one can compute the proportion of all tenancy transactions linked with any labor commitments. These figures appear in the last row and indicate that labor commitments are involved in 6 percent or less of the transactions.



## CONCLUSIONS

This study is based on farm-level data over three to four years, collected by the ongoing village-level studies of ICRISAT. The very high proportion (77 to 97 percent) of total land transfers that are land transfers via tenancy confirms that in India the land market is largely a tenancy market. The relatively higher extent of tenancy in those villages that are subject to drought or that have substantial irrigation suggests that both these factors tend to necessitate greater periodic resource adjustments, which are facilitated by tenancy.

The recent emergence of large farmers as tenants and small farmers as landowners contradicts the conventional presumption that the tenant is usually a poor, small land operator whereas the landlord is invariably a large farmer. In the study villages, 13 to 69 percent of total leased-out land was acquired by large farmers, and 56 to 89 percent of total leased-out land belonged to small and medium farmers. This has important policy implications. First, the heterogeneity of the tenant class further complicates tenurial policies. Tenancy policies should be considered as oriented primarily to benefit the poor, since the large tenants can also benefit. Second, the heterogeneity of tenants may adversely affect the small tenant, because he now has new competitors who are in a superior resource position and are competing for limited land resources. Competition has sometimes induced small landowners to lease out their land instead of supplementing it by leasing in land. Third, tenancy allows large farmers to circumvent land ceiling laws that apply only to owned land, not to leased-in land (A. IV. 3).

Output sharing rather than fixed rental is found to be the most common pattern in all villages except Aurepalle. Terms of tenancy were very flexible and adjusted substantially to (1) land productivity, (2) availability of capital from landowner and tenant, and (3) midseason contingencies affecting either of the parties. This was true both across and within villages. Because of the practice of direct linking of output share to input share and because crop choice was largely left to the tenant, tenancy did not appear to discourage adoption of (high cost) new technology by tenants.

Resource adjustment was the principal reason for leasing of land in five out of six villages. In the sixth village (Aurepalle), the traditional type of absentee landlordism dominated the tenancy situation. In all villages except Aurepalle, tenancy clearly tended to reduce the large gap between landowner and tenant in availability of land per bullock. However, tenancy did not tend to equalize the land/family labor ratios. This is quite plausible, as there are several alternative means to handle oversupply or undersupply of family labor in relation to owned land.

Interlocking of factor markets or factor product markets, indicated by interlinked transactions where tenancy was either cause or effect, was found

to be the next most important reason for tenancy in some villages. Land lease and credit were often interlinked in Sholapur villages, where, contrary to the conventional pattern, tenants extended credit to landowners to get land on lease. In Akola villages, land lease, credit, and cotton marketing were most frequently interlinked. Interlinked transactions in Mahbubnagar were more complex and varied. They concerned supply of scarce inputs, urban-rural links, sharing of water facilities, and so on.

Thus, tenancy is primarily an outgrowth of bullock power adjustments and credit market imperfections (which leads to linked transactions with credit). The human labor market seems to be functioning sufficiently well and few households seem to lease land particularly for reasons of oversupply or undersupply of family labor in relation to owned land or because of difficulties in hiring daily labor.

Terms of tenancy are very flexible and greatly responsive to the resource positions of tenant and landowner and to midseason contingencies affecting either of the parties.