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Changes in Contractual Relations in Land and Labour in India*

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The objective of this paper is to delineate some of the emerging changes in contractual relations in agricultural land and labour markets in India on the basis of available macro and micro evidence.

Agricultural labour and land lease markets are partly interrelated. First, both for the land-poor and landlord/employers, wage-labour and tenancy achieve somewhat similar objectives -- for the first, achieving the goal of subsistence, and for the second, minimising various types of costs and achieving a high level of surplus.[1] Second, in a more dynamic setting, changes in the nature and magnitude of tenancy over time could affect the prospects of the land-poor in the labour market. Third, the interrelationship between land and labour contracts may also arise because of the interlinkage of these contracts (mutually, and with other transactions, such as those in credit or product markets). Such interlocking has several implications, including the implication that the outcomes in the individual transactions no longer remain separable.

CHANGES IN CONTRACTUAL RELATIONS IN LAND

Traditional land relations in India were deeply affected with the advent of the British colonial rule and the introduction of new forms of private property in land. Notions of the appropriate form of agrarian organisation underwent changes as the British consolidated their rule, first in the Eastern, then in the Southern, Western, and North-Western parts of the country. The consequent differences in revenue arrangements implied less sub-infeudation in the ryotwari areas. Further, demographic and economic factors, together with the differential impact of rent/revenue on different cultivators created ground for regional differences in the pattern of surplus appropriation and the extent of economic differentiation among the peasantry. Tenancy and debt relief legislation provided a further basis for differentiation and creation of a narrow stratum of rich peasantry, to a lesser or greater degree, in different regions (Bharadwaj, 1982).

By and large, with the kind of differences noted above, land was largely cultivated by various categories of tenants, who combined the payment of cash or kind rents with other obligations and the payment of cesses, and who enjoyed varying degrees

* Keynote Paper.

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of security of tenure. The legislations abolishing intermediaries in the post-independence period, paved the way for providing proprietary rights to the actual tillers of the soil. In actual practice, the post-independence agrarian reforms had a two-fold impact, expanding the proprietary base of land ownership, but at the same time, divesting the relatively insecure tenants of possession of land. Further rounds of agrarian reforms introduced tenancy regulation and a ceiling on land holdings. These legislative measures combined with the growing profitability of cultivation in several parts of the country following the green revolution, and brought about changes in the prevailing mode of agrarian organisation.

One of the crucial issues in the analysis of changes in agrarian organisation is the nature and extent of tenancy relations prevailing in different parts of India and whether changes in tenancy relations are symptomatic of larger changes prevailing in Indian agriculture. Specifically, the issue of tenancy is linked to an exploration of the development of capitalist relations in Indian agriculture. But the links of tenancy with the capitalist development in Indian agriculture has been the subject of an intense debate (Srivastava, 1989). Basically, the exaction of rents as surplus from direct producers by a class of disinterested landlords is expected to deter productive accumulation in agriculture (Bhaduri, 1973 a, b). But with the growth of capitalism, tenancy itself is expected to undergo a change, with the appearance of capitalist tenants who are able to make normal profits from agriculture, over and above the payment of rents to the landowner. The form of rents is also expected to undergo a change, with a shift to fixed rents and cash rents. At the same time, in one school of thought, capitalist production, which requires a closer control over the production process, is expected to be increasingly based on self-cultivation with wage labour and hence tenant-based production is expected to decline and eventually disappear.

The post-independence agrarian reforms were essentially based on a presupposition of peasant-based agriculture. In the current phase of liberalisation, in which a close integration of Indian agriculture is envisaged with the world market and agri-businesses are coming to play a larger role, the legislative frameworks governing land use, ownership and tenancy are coming under considerable scrutiny.

Magnitude of Tenancy and Who Leases from Whom

Since the forms of tenancy which exist on the ground are not in accordance with the regulatory framework, tenancy is largely unrecorded, and is, also, therefore, under-reported in the various land holding surveys carried out by the National Sample Survey (NSS). Even micro-studies are not always successful in detecting tenancy and it is common knowledge that the magnitude of tenancy revealed is often proportional to the length of the stay of the researchers in the field. Careful fieldwork over a long period of time normally shows a much higher magnitude of tenancy than that brought out by short-period surveys.[2] Not only this, longitudinal surveys often bring a picture of changes in tenancy which are quite different from snapshot surveys.

Even with these caveats, the NSS land holding surveys provide substantial information on the trends and pattern of leasing in India. According to the 48th Round Survey on Land Holdings, approximately 8.3 per cent of the operated area was under lease in 1991-92 in 10.27 million tenant holdings, which formed 11 per cent of all holdings.

The percentage of area under tenancy estimated by the Land Holding Surveys has been slowly declining but in recent decades tenancy has been quite tenacious. The percentage of area recorded under tenancy in 1954-55 was 20.3. However, these figures are not strictly comparable to later surveys, as this survey also recorded long-term leases as tenancy. The total percentage of operated area leased in by rural households declined from 10.7 in 1960-61 to 10.6 in 1970-71 and 7.2 per cent in 1981-82 but rose to 8.3 per cent in 1991-92. In absolute numbers, tenant holdings remained stable at 5.5 million during 1960-61 to 1981-82 but their numbers increased sharply to about 12 million in 1991-92. As a percentage of all holdings, however, the proportion of tenant holdings remained quite stable up to 1971-72, but declined quite systematically thereafter. Their percentage declined from 23.5 in 1960-61 and 25.7 in 1970-71 to 15.2 in 1981-82 and 11.0 in 1991-92.

As stated earlier, traditional tenancy relations involve the leasing out of land by large landowners to peasant producers, thereby appropriating their labour surplus as rent. But, with rising capital intensity of production and emergence of economies of scale in agriculture, large capitalist cultivators may lease in land from others, thus also sidestepping ceiling legislation. The phenomenon of large cultivators leasing in land (sometimes from small landowners, through 'reverse leasing') has been observed in India since the Eighth Survey (1954-55), and has been considered to be quite widespread in some of the North-western and Western states (Vyas, 1970; Laxminarayan and Tyagi, 1977). This phenomenon is considered to have accelerated during 1981-82 and 1991-92, with both the percentage of operated area leased in and proportion of tenant holdings increasing significantly in the large holding size category. The percentage of operated area leased in fell in marginal holdings through the 26th and 48th Round Land Holding Surveys and remained constant for small holdings between the 37th and 48th Round Surveys. But the percentage area leased in increased both for semi-medium and medium holdings between 1981-82 and 1991-92. It rose significantly for large holdings during this period (from 5.3 per cent to 11.4 per cent of operated area). The percentage of tenant to total holdings also fell in all major categories of land holdings between 1970-71 and 1991-92 except in the case of large holdings where it increased from 11.5 per cent to 16.7 per cent in the last decade.

Another indication of the increasing concentration of tenancy in large holding sizes comes from the evidence that in a number of states, the percentage of area under tenancy increased quite sharply between 1981-82 to 1991-92 even with a fall in the percentage of tenant holdings. The percentage of tenant holdings declined from 25.9 to 17.1 in Haryana during this period but at the same time, the percentage of area

under tenancy increased sharply from 18.2 to 33.7. A similar phenomenon was recorded in Punjab, Rajasthan, Uttar Pradesh, Tamil Nadu, Karnataka, Gujarat, Assam and Kerala. However, Bihar recorded a sharp decline in both the percentage of tenanted holdings and area.

However, an analysis of the distribution of tenant holdings and leased-in area across size classes of operational holdings shows that the increased concentration of tenant holdings and leased area is restricted to a few states. Table 1 gives the distribution of tenant holdings in 1981-82 and 1991-92 across size-classes of operational holdings. Overall, the change is quite small with marginal holdings accounting for 52.5 per cent of tenant holdings in 1981-82 and 53.2 per cent in 1991-92. Similarly 9.7 per cent and 9.3 per cent of tenant holdings were in the size-class of

TABLE 1. PERCENTAGE OF HOLDING LEASING IN LAND TO TOTAL HOLDING LEASING IN LAND. BY SIZE-CLASS OF OPERATED HOLDINGS, 1981-82 AND 1991-92

State	Year	Marginal (0-1 ha)	Small (1-2 ha)	Medium (2-4 ha)	Large (> 4 ha.)	All size-classes
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh	1981	40.23	24.10	19.51	16.06	100.00
	1991	43.76	31.11	19.54	5.59	100.00
Assam	1981	42.50	27.42	24.38	5.70	100.00
	1991	55.31	34.55	6.51	3.62	100.00
Bihar	1981	61.70	27.60	8.63	2.07	100.00
	1991	77.94	16.55	5.15	0.36	100.00
Gujarat	1981	57.40	14.93	8.20	9.47	100.00
	1991	39.34	18.64	24.72	17.29	100.00
Haryana	1981	15.38	12 57	41.25	30.80	100.00
	1991	13.28	11.08	31.26	44.37	100.00
Karnataka	1981	21.75	27.99	26.80	23.46	100.00
	1991	33.95	27.40	18.14	20.51	100.00
Kerala	1981	90.69	7.75	0.76	0.79	100.00
	1991	87.15	9.11	2.04	1.70	100.00
Madhya Pradesh	1981	23.17	26.43	16.72	31.68	100.00
	1991	28.71	31.21	25.02	15.07	100.00
Maharashtra	1981	38.87	9.24	17.44	34.45	100.00
	1991	35.48	13.92	16.87	33.73	100.00
Orissa	1981	46.09	31.34	17.82	4.75	100.00
	1991	52.21	33.87	11.99	1.94	100.00
Punjab	1981	30.79	16.28	23.21	29.72	100.00
	1991	29.23	12.90	22.36	35.52	100.00
Rajasthan	1981	21.11	12.68	29.70	36.51	100.00
	1991	34.00	11.36	16.78	37.86	100.00
Tamil Nadu	1981	73.67	16.42	7.83	2.08	100.00
	1991	70.80	18.09	8.68	2.43	100.00
Uttar Pradesh	1981	50.52	29.06	15.38	5.04	100.00
	1991	55.49	28.60	12.06	3.85	100.00
West Bengal	1981	73.28	16.49	8.93	1.30	100.00
	1991	74.72	20.75	3.95	0.58	100.00
All-India	1981	52.55	22.90	14.80	9.75	100.00
	1991	53.18	24.20	13.36	9.26	100.00

Sources: NSS 37th and 48th Rounds.

holdings exceeding 4 ha in 1981-82 and 1991-92 respectively. But there are large inter-state variations with the percentage of tenant holdings increasing quite sharply in the large holding category in some states (for example, Haryana, Gujarat and Punjab), and falling in other states (for example, Andhra Pradesh and Madhya Pradesh).

While the distribution of tenant holdings across size-classes has remained quite stable at the national level, there has, however, been an increase in the proportion of leased in area in large holdings in the last two decades (Table 2). Between 1971-72 and 1991-92, the percentage of total leased area in large holdings increased from 38.4 per cent to 42.8 per cent at the all-India level. Sizeable increases in this proportion occurred in Haryana (59.4 per cent of total leased area in large holdings in 1971-72 and 82.1 per cent in 1991-92), Assam (4.8 per cent to 28.5 per cent), Kerala (12.4 per cent to 17.2 per cent), Maharashtra (64.7 per cent to 73.2 per cent), Punjab (56.7 per cent to 66.3 per cent), Rajasthan (70.1 per cent to 75.5 per cent) and Tamil Nadu (10.4 per cent to 18.5 per cent). On the other hand, there are several states in which the proportion of total leased area in marginal/small holdings has increased and/or the proportion of such area in large holdings has decreased. States such as Andhra Pradesh, Bihar, Orissa, Uttar Pradesh and West Bengal all show an increased proportion of leased area in marginal/small holdings, along with a smaller share of leased area in large holdings.

TABLE 2: PERCENTAGE SHARE OF DIFFERENT SIZE-GROUPS OF OPERATIONAL HOLDINGS IN AREA LEASED IN DIFFERENT STATES, 1971-72 AND 1991-92

States	Upto 2.0 ha		2.01-4.00 ha		> 4.00 ha	
	1971-72	1991-92	1971-72	1991-92	1971-72	1991-92
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Andhra Pradesh	27.82	44.52	26.77	29.17	45.41	26.29
Assam	70.22	57.62	24.98	13.88	4.80	28.53
Bihar	69.63	81.07	21.01	17.35	8.36	1.61
Gujarat	11.06	14.56	23.48	43.59	65.46	41.89
Haryana	12.78	3.42	27.84	14.45	59.38	82.14
Karnataka	19.19	22.66	17.21	12.40	63.60	64.96
Kerala	70.48	69.13	17.13	13.46	12.39	17.15
Madhya Pradesh	21.95	26.80	24.88	35.54	43.17	37.65
Maharashtra	13.89	10.19	21.38	16.62	64.73	73.20
Orissa	56.44	71.37	26.56	23.42	17.00	5.21
Punjab	10.01	12.37	33.29	21.32	56.70	66.31
Rajasthan	8.10	12.05	21.82	12.44	70.08	75.48
Tamil Nadu	59.68	56.86	29.92	24.68	10.40	18.50
Uttar Pradesh	51.90	57.67	28.97	25.27	19.13	17.07
West Bengal	71.51	86.42	23.92	12.26	4.57	1.32
All-India	36.82	35.56	24.81	21.60	38.37	42.84

Note: 1971-72 size-classes are (1) upto 2.02 ha; (2) 2.03 – 4.04 ha; (3) > 4.04 ha.
Sources: NSS 26th and 48th Rounds.

Leasing according to Ownership Holdings

Since operational holdings show ex-post adjustments (after households have taken certain decisions regarding leasing), an examination of leasing according to owned holdings brings out the nature of leasing by different groups of rural households across states. Such an examination brings out quite sharply the continued dependence of land-poor households on leasing in of land in most of the states.

Table 3 shows that in 9 of the 15 major states, the households owning less than half a hectare of land account for more than half the households leasing in land. Even at the all-India level, such households comprise 58.7 per cent of all households leasing in land during 1991-92. The maximum proportion of small lessees (owning less than 0.5 hectare) are in Bihar (78.5 per cent), Kerala (76.9 per cent), West Bengal (76.5 per cent), Tamil Nadu (68.2 per cent), Assam (68.1 per cent) and Orissa (63.2 per cent). Households owning more than 1 hectare of land account for more than half the lessee households in only a handful of states in North-western (Punjab, Haryana), Western (Maharashtra, Rajasthan) and Southern (Karnataka) India.

TABLE 3. PERCENTAGE OF TOTAL HOUSEHOLDS (HH) LEASING IN AND PERCENTAGE TO TOTAL AREA LEASED IN AREA BY SIZE-CLASS OF OWNED HOLDINGS (1991-92)

	Size class of ownership holding (in hectares)						
States	0.00 - 0.50	0.51 – 1.00	1.00 – 2.00	2.00 – 4.00	4.00 - 10.00	10.01 and above	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh							
Percentage to total hh leasing in	52.08	22.10	15.43	8.54	1.81	0.05	100.00
Percentage to total leased in area	43.34	21.72	17.47	11.08	5.35	1.04	100.00
Assam							
Percentage to total hh leasing in	68.05	16.83	12.94	1.32	0.86	0.00	100.00
Percentage to total leased in area	55.37	22.00	17.25	2.55	2.77	0.00	100.00
Bihar							
Percentage to total hh leasing in	78.49	10.35	8.91	1.91	0.34	0.00	100.00
Percentage to total leased in area	75.13	9.93	9.96	4.09	0.89	0.00	100.00
Gujarat							
Percentage to total hh leasing in	59.92	9.84	17.35	4.30	1.74	0.00	100.00
Percentage to total leased in area	63.52	4.62	22.17	6.56	3.14	0.00	100.00
Haryana							
Percentage to total hh leasing in	21.14	10.75	25.20	34.45	8.12	0.37	100.00
Percentage to total leased in area	8.59	5.23	14.98	33.89	37.16	0.16	100.00
Karnataka							
Percentage to total hh leasing in	36.39	11.95	24.65	16.56	9.12	1.36	100.00
Percentage to total leased in area	22.83	14.45	21.18	24.61	14.37	2.56	100.00

(*Contd.*)

TABLE 3 (*Concld.*)

States (1)	Size-class of ownership holding (in hectares) 0.00 - 0.50 (2)	0.51 – 1.00 (3)	1.00 – 2.00 (4)	2.00 – 4.00 (5)	4.00 – 10.00 (6)	10.01 and above (7)	Total (8)
Kerala							
Percentage to total hh leasing in	76.92	12.41	7.11	2.73	0.91	0.00	100.00
Percentage to total leased in area	59.12	11.32	11.95	13.52	4.40	0.00	100.00
Madhya Pradesh							
Percentage to total hh leasing in	47.09	16.98	17.91	8.55	4.67	1.71	100.00
Percentage to total leased in area	51.24	10.77	13.84	12.39	8.58	3.17	100.00
Maharashtra							
Percentage to total hh leasing in	32.95	7.90	26.29	15.53	13.92	0.69	100.00
Percentage to total leased in area	21.75	4.33	33.50	20.02	1.05	1.05	100.00
Orissa							
Percentage to total hh leasing in	63.18	19.47	9.48	4.90	0.93	0.00	100.00
Percentage to total leased in area	62.16	18.99	10.60	7.06	1.17	0.00	100.00
Punjab							
Percentage to total hh leasing in	43.00	6.27	14.68	18.86	16.13	0.74	100.00
Percentage to total leased in area	18.97	5.25	18.16	26.72	29.48	1.37	100.00
Rajasthan							
Percentage to total hh leasing in	37.88	11.73	23.87	15.17	10.34	1.02	100.00
Percentage to total leased in area	34.72	3.79	18.86	26.17	13.90	2.56	100.00
Tamil Nadu							
Percentage to total hh leasing in	68.23	14.64	11.29	3.36	0.69	0.19	100.00
Percentage to total leased in area	55.96	15.02	15.93	9.03	3.86	0.20	100.00
Uttar Pradesh							
Percentage to total hh leasing in	59.69	18.71	15.85	3.35	1.05	0.22	100.00
Percentage to total leased in area	51.20	21.24	18.93	5.70	1.36	1.57	100.00
West Bengal							
Percentage to total hh leasing in	76.52	14.35	4.93	2.36	0.15	0.00	100.00
Percentage to total leased in area	74.08	15.40	2.71	2.71	0.10	0.00	100.00
All-India							
Percentage to total hh leasing in	58.68	15.74	14.33	6.76	2.91	0.35	100.00
Percentage to total leased in area	42.85	12.25	16.98	15.17	11.51	1.24	100.00

Source: NSS 48th Round.

Small lessees also account for the bulk of land which is leased in. During 1991-92, households owning less than 0.5 hectare leased in more than half the land under lease in nine states (Bihar, West Bengal, Kerala, Tamil Nadu, Orissa, Assam, Uttar Pradesh, Gujarat and Madhya Pradesh). Households owning more than two hectares of land account for more than 50 per cent of leased-in land in only two states (Punjab and Haryana), whereas households owning more than one hectare of land account for more than 50 per cent of leased in land in three other states as well (Maharashtra, Karnataka and Rajasthan).

The differential importance of leasing in to the various groups of rural households, categorised by land ownership, is shown in Table 4.

TABLE 4. PERCENTAGE OF HOUSEHOLDS (HH) LEASING OUT AND LEASING IN, AND PERCENTAGE OF LEASED IN TO OWNED AREA BY SIZE-CLASS OF OWNED AREA (1991-92)

States	Size-class of ownership holding (in hectares)						
	0.00 - 0.50	0.51 - 1.00	1.00 - 2.00	2.00 - 4.00	4.00 – 10.00	10.01 and above	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh							
Percentage hh leasing in	17.41	17.41	13.22	10.91	5.10	3.35	15.94
Percentage leased in to owned area	52.03	15.68	7.56	4.37	2.13	1.25	9.65
Assam							
Percentage hh leasing in	24.94	7.64	10.64	2.37	8.55	0.00	16.73
Percentage leased in to owned area	40.66	6.22	4.40	0.82	2.42	0.00	7.98
Bihar							
Percentage hh leasing in	8.48	4.85	5.12	2.00	0.99	0.00	7.04
Percentage leased in to owned area	25.20	2.78	1.80	0.72	0.20	0.00	4.35
Gujarat							
Percentage hh leasing in	16.38	4.70	4.33	5.26	1.30	0.00	10.56
Percentage leased in to owned area	99.44	2.87	6.05	1.12	0.41	0.00	4.23
Haryana							
Percentage hh leasing in	9.31	6.98	26.90	40.41	13.71	6.91	18.27
Percentage leased in to owned area	140.39	39.45	45.83	41.41	41.17	0.80	41.08
Karnataka							
Percentage hh leasing in	16.03	10.00	12.85	8.84	11.25	15.01	13.21
Percentage leased in to owned area	56.68	18.42	10.69	8.36	5.00	3.12	10.22
Kerala							
Percentage hh leasing in	10.53	5.06	4.37	5.04	13.33	0.00	9.59
Percentage leased in to owned area	6.73	1.40	1.36	2.53	1.86	0.00	3.23
Madhya Pradesh							
Percentage hh leasing in	19.09	11.67	8.29	5.35	4.20	8.22	12.33
Percentage leased in to owned area	207.77	13.61	6.55	3.64	1.77	1.40	7.38
Maharashtra							
Percentage hh leasing in	24.70	6.20	10.32	6.09	7.48	1.61	15.84
Percentage leased in to owned area	65.07	4.24	13.69	4.04	2.98	0.26	5.18
Orissa							
Percentage hh leasing in	28.01	18.05	9.92	10.82	7.48	0.00	22.30
Percentage leased in to owned area	66.36	13.60	4.44	3.10	0.74	0.00	11.39
Punjab							
Percentage hh leasing in	11.99	13.01	19.87	20.88	30.66	9.33	15.23
Percentage leased in to owned area	119.94	22.06	26.71	16.06	14.09	2.03	18.19
Rajasthan							
Percentage hh leasing in	21.75	5.78	8.74	6.39	5.52	1.51	10.89
Percentage leased in to owned area	163.53	5.30	10.97	8.06	2.57	0.44	5.83

(*Contd.*)

TABLE 4 (*Concld.*)

States	Size-class of ownership holding (in hectares)						
	0.00 - 0.50	0.51 - 1.00	1.00 - 2.00	2.00 - 4.00	4.00 - 10.00	10.01 and above	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Tamil Nadu							
Percentage hh leasing in	21.31	14.07	13.28	11,09	7.29	13.89	19.49
Percentage leased in to owned area	51.17	9.30	7.34	4.54	3.86	0.58	12.34
Uttar Pradesh							
Percentage hh leasing in	18.78	15.17	16.03	6.26	5.64	15.23	16.50
Percentage leased in to owned area	58.03	14.85	8.95	2.60	0.88	4.96	11.82
West Bengal							
Percentage hh leasing in	19.96	14.78	7.97	8.65	3.18	-	17.75
Percentage leased in to owned area	48.79	8.04	3.28	1.40	0.15	-	12.02
All-India							
Percentage hh leasing in	18.03	10.93	10.92	8.33	6.54	3.97	14.69
Percentage leased in to owned area	59.90	10.66	8.39	5.68	4.07	0.83	9.01

Source: NSS 48th Round.

The proportion of households leasing in land declines steadily as land ownership increased, in most of the states. At the all-India level, the percentage of households leasing in land is the highest for households owning less than 0.5 hectare of land (18 per cent) and declines to 10.9 per cent for households owning 0.5-1.0 ha and 1.01-2.0 ha. The percentage of households leasing in land declines to 8.3 per cent for households owning 2.01-4.0 ha and further to 6.5 per cent and 4 per cent for households owning 4.01-10.0 ha and above 10.01 ha respectively. This pattern is exhibited by a number of other states. However, the incidence of tenancy is higher among larger landowners in Punjab and Haryana, while a few other states (Karnataka, Maharashtra and Rajasthan) do not show a systematic trend for the higher size classes (above 0.5 ha.).

The overall dependence on leasing is demonstrated by the second row in Table 4 which gives the percentage of leased in area to owned area in each size-group of land ownership in 1991-92. The proportion of leased to owned area is very high (59.9 per cent) in the smallest size-class of land ownership (0 to 0.5 ha) at the all-India level. It then declines to 10.7 per cent in the next category (0.51 to 1 ha) and then steadily falls to 4.1 per cent in the 4.01 to 10 ha size-group and 0.8 per cent for above 10 ha size-group. In fact the significant dependence of the smallest landowners and the inverse relationship in the proportion of leased to owned land with increasing land ownership is a feature of all states except Punjab, Haryana, Maharashtra and Rajasthan where the latter relationship is not so clear.

As far as leasing out is concerned (for which data are far less reliable), analysis of the 48th Round data shows that lessors form a smaller proportion of households in the smallest size-class of land ownership (less than 0.5 ha), but the incidence of leasing out does not vary systematically in most of the states among the other size-

classes of landowners, even though households owning more than 2 ha of land do tend to have a higher proportion of lessors. This is also borne out by the all-India trend where the percentage of lessors to total households is only 2.7 for the lowest size-class (0-0.5 ha) but rises to 6.5 and 7.3 for the 0.5-1.0 ha and 1.01–2.0 size-classes. For the higher size-classes (2.01–4.0 ha, 4.01–10.0 and 10.01 and above), the percentage of lessor households is 10, 8.3 and 7.4 respectively.

Thus the predominant feature of the lease market even today is the presence of large numbers of land-poor households among the lessees. There are only a few states where land-rich households have a sizeable presence as lessees. These include Punjab and Haryana where capitalism has made deep inroads into agriculture. In the case of some of the other states (Maharashtra, Karnataka, Rajasthan), the size of land ownership is a relatively poor indicator of the productive base of the household.

In other words, lease relationships, with land-poor households leasing in from other households are, by far, still the principal feature of the tenancy situation in India. At the same time, both macro-surveys such as the NSS and a number of micro-studies also attest to the emergence of a class of well-to-do tenants, whose terms and conditions of lease are often different from the poor. This phenomenon, which was already well entrenched in some states a few decades ago, has gathered strength in the most recent period and has undoubtedly contributed to the steady increase in the concentration of operational holdings.[3]

Terms of Lease

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. The existence of sharecropping has been explained on the basis of a combination of more than one factor which include risk-sharing, incentive effects, asymmetric information and transactions costs. The question of changes in the form of crop-sharing and/or changes in the form of rent, from crop-sharing to fixed rents-in-kind or cash rents, which is central to classical analyses of tenancy, is not considered in detail in most neo-classical theorising. Marxist treatments of rent give considerable attention to the evolution of forms of rent. The emergence of fixed cash rents, which transfer production risk to the tenant but allow the tenant to treat the surplus, net of the fixed rent as profit, is considered to be more compatible with the development of capitalism in agriculture. The implications of the forms of tenancy have, however, to be analysed in very specific contexts and abstract generalisations are difficult.

In the Indian case, the payment of land revenue to the colonial government in cash, necessitated the extraction of rents in cash from tenants. Thus, cash rents were widely prevalent in colonial India, with the inferior tenants and tenants-at-will generally subject to crop-shares. During 1960-61 and 1981-82 cash rents and fixed rent in kind showed a declining trend, but between 1981-82 and 1991-92, the percentage of leased area under fixed rents showed a very significant increase (Table 5). During this decade, the percentage of leased area under cash rents increased from 10.9 per cent to 19 per cent while the percentage of area under fixed rent in kind increased from 6.3 to 14.5.

TABLE 5. PERCENTAGE DISTRIBUTION OF AREA LEASED IN BY TERMS OF LEASE FOR MAJOR STATES: 1991-92 AND 1981-82

States	Year	Terms of lease					
		Fixed money	Fixed produce	Share of produce	From relatives – no terms	Others	All
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Andhra Pradesh	1991-92	25.9	26.8	28.9	3.3	15.1	100
	1981-82	13.0	11.1	8.8		67.1	100
Assam	1991-92	17.0	4.0	27.8	1.2	50.0	100
	1981-82	15.4	8.4	35.3		40.9	100
Bihar	1991-92	9.5	12.8	43.5	0.6	33.6	100
	1981-82	6.5	3.6	73.3		16.6	100
Gujarat	1991-92	39.9	1.6	23.7	7.4	27.4	100
	1981-82	5.1	0.5	9.7		84.6	100
Haryana	1991-92	61.4	5.2	19.9	0	13.5	100
	1981-82	24.2	10.8	41.2		23.8	100
Karnataka	1991-92	20.4	14.7	28.6	3.3	33.0	100
	1981-82	3.6	4.7	29.3		62.4	100
Kerala	1991-92	15.9	0	2.1	39.2	42.8	100
	1981-82	3.4	0	13.2		84.9	100
Madhya Pradesh	1991-92	15.3	21.4	24.9	6.2	32.2	100
	1981-82	1.7	1.1	27.8		69.4	100
Maharashtra	1991-92	36.2	6.5	20.9	12.4	24.0	100
	1981-82	11.0	2.3	48.5		38.2	100
Orissa	1991-92	19.7	4.7	50.9	4.2	20.5	100
	1981-82	5.1	8.1	42.0		44.8	100
Punjab	1991-92	49.2	18.2	11.3	6.9	14.4	100
	1981-82	42.1	4.6	39.9		13.4	100
Rajasthan	1991-92	15.2	19.4	23.4	15.5	26.5	100
	1981-82	3.5	1.4	21.6		73.5	100
Tamil Nadu	1991-92	32.4	20.5	16.1	13.8	17.2	100
	1981-82	19.2	19.9	36.5		24.4	100
Uttar Pradesh	1991-92	9.2	15.2	46.5	7.1	22.0	100
	1981-82	8.6	4.9	50.1		36.4	100
West Bengal	1991-92	8.6	11.7	46.5	7.1	26.1	100
	1981-82	2.8	11.9	55.6		29.7	100
All-India	1991-92	19.0	14.5	34.4	7.4	24.7	100
	1981-82	10.9	6.3	41.9		40.9	100
	1971-72	15.4	11.6	47.9		25.1	100
	1961–62	25.6	12.9	38.2		23.3	100

Sources: NSS 17th, 26th, 37th and 48th Rounds.

Table 5 shows that all states have recorded an increase in the proportion of leased area under cash rent between 1981-82 and 1991-92. Significant increases in the proportion of leased area under cash rent tenancy took place in Haryana (from 24.2 per cent of leased area to 61.4 per cent), Andhra Pradesh (from 13 per cent to 25.9 per cent), Tamil Nadu (from 19.2 per cent to 32.4 per cent), Gujarat (from 5.1 per cent to 39.9 per cent), Maharashtra (from 11 per cent to 36.2 per cent), Madhya Pradesh (from 1.7 per cent to 15.3 per cent) and Karnataka (from 3.6 per cent to 20.4 per cent). A few states also recorded very significant increases in the proportion of leased area under fixed rent in kind (Andhra Pradesh, Madhya Pradesh, Karnataka, Rajasthan, Uttar Pradesh, Punjab, among others).

In many states (Gujarat, Haryana, Kerala, Maharashtra, Punjab and Tamil Nadu), crop-sharing no longer remained the predominant form of leasing in 1991-92. But crop-sharing remained most prevalent in Orissa (51 per cent), West Bengal (46 per cent), Uttar Pradesh (46 per cent), and Bihar (44 per cent).

By and large, at the all-India level, larger tenant holdings recorded a larger proportion of leased area under cash rents, while the opposite was the case with sharecropping. During 1991-92, the percentage of leased area under cash rents was 16.9 per cent in holdings below 0.5 hectare. This percentage rose to 23.8 for holdings between 0.51-1.00 ha, and further to 25.2 for holdings in the 1.01-2.00 ha category. Land holdings between 2.01–4.00 ha had 41.1 per cent area under cash rents, while holdings above 4 ha had 42.3 per cent area under cash rental. On the other hand, the area under sharecropping declined steadily from 48.2 per cent for the smallest size holdings below 0.5 ha to 24.5 per cent of leased area for holdings above 4 ha. However, studies have shown the prevalence of a wide variety of sharing arrangements, but for inputs and output (rent).[4]

The existence of cash rents presupposes a higher level of monetisation of the agricultural economy, a condition which is met more easily by the Western and Southern states and by larger producers. The payment conditions of cash rents varies from area to area. In some areas, cash rents cover contracts exceeding one year and are required to be paid in advance. A comparison of cash and kind rents with crop shares show that the former tend to be lower in high productivity cash crop regimes.[5] In combination with relatively low production risks, such rents could even be favourable to small tenants, but generally the contractual and risk-bearing conditions associated with such rents make them more favourable to larger cultivators.

Duration of Lease and Seasonal Leasing

Bharadwaj and Das's (1975) study of emerging tenancy relations in Orissa, and a number of other studies have noted the oral and informal contractual conditions associated with tenancy, as well as the increase in insecurity of tenure. Corresponding to these changes, there has also occurred a shortening in the period of lease, which reaches a logical limit when the lease period coincides with a single cropping season.

Information on the seasonal operation of holdings and seasonal leases has been collected by the NSS survey on land holdings both for 1981-82 and 1991-92. During 1991-92, 16 per cent of holdings had leased in land, but 7 per cent and 1 per cent had leased in land *exclusively* during *kharif* and *rabi* seasons respectively. The percentage of seasonal tenant holdings was found to be 50 per cent or higher in several states - Andhra Pradesh, Assam, Gujarat, Kárnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and West Bengal. The average size of tenant holdings held seasonally was found to be much smaller than the perennial tenant holdings. While '*kharif* only' and '*rabi* only' tenant holdings were only 0.26 ha and 0.42 ha respectively, perennial tenant holdings amounted to 1.09 ha on an average.

Unfortunately, the NSS survey does not clarify whether land leased seasonally is cultivated seasonally or perennially. Clearly, the former case is much less interesting from our point of view. According to the 48th Round Survey, 11.8 per cent of area was operated nationally only in the *kharif* season, while 0.71 per cent of area was operated only in the *rabi* season. Compared to this, 18.55 per cent of leased-in area was only for the *kharif* season, while 3.49 per cent of the area was leased in during *rabi* only. Generally, states which have a high percentage of area under seasonal operation also have recorded a high proportion of area under seasonal lease. The state-level correlation between percentage of area operated seasonally and percentage of area leased in seasonally is quite high (0.73 in the case of '*kharif* only' area and 0.61 in the case of '*rabi* only' area), indicating that high 'seasonal' leases recorded by the NSS may often only be leases on land cultivated for a single season.

The survey also provides information on land 'leased in for a major part of the year' and 'leased in at any time'. If the difference between these two figures is taken as land leased in for only part of the year, the analysis shows that the proportion of such leased in land to total leased in land fell as the size-group of operational holding increased. It formed 15 per cent of the land leased in holdings below 0.5 ha, 3 per cent of leased land in holdings between 0.5-1.0 ha, 2.7 per cent in holdings between 1.0 to 2.0 ha, 0.9 per cent of leased area in holdings between 2 and 4 ha, and 1.9 per cent in holdings above 4 ha.

Micro studies throw considerable light on seasonal leasing. In a study of three villages in Uttar Pradesh, Srivastava (1989, 1996) found that paddy was leased out seasonally on a widespread basis in Western Uttar Pradesh villages to landless labour households, who were expected to provide labour and one-fourth of the cost of material inputs, but the fields were ploughed with the land-owners' tractors/ploughs. The phenomenon was so widespread that landless households had recourse to very little alternative employment, other than the employment on leased land, even though the returns to labour were lower than the prevailing wage level. The study noted that through seasonal leasing, land owners were able to sidestep downwardly rigid wage levels, keep supervision costs low, and utilise non-marketable labour in tenant households. On the other hand, tenants were reduced to the status of piece-rated labourers, with the proviso that they shared production risks. Similar seasonal leases

also existed for other, usually labour intensive crops in the region (onion, potato, sugarcane) and seasonal lease arrangements were also beginning to emerge in other parts of Uttar Pradesh.

Seasonal leases have also been reported in other parts of the country, notably in Orissa, West Bengal and Andhra Pradesh (Bharadwaj and Das, 1975; Byres, 1981; Harris, 1993; Khasnabis, 1995; Chadha and Bhaumik, 1992). Harris (1993) notes that in Bengal, "short term leasing of land for the cultivation of small areas of sugarcane, for second crops of potatoes and relatively high value vegetables, and latterly and most importantly, for the cultivation of 'boro' season paddy has become more important" (p. 1239). These leases, which involved half-half crop shares or fixed rent contracts ('thika') had become more important, in areas where groundwater sources had developed, basically involving agricultural labourers. From the point of view of employers, such a contract was "a piece rate labour contract, which reduces the cost of recruiting and supervising labour for all operations – though particularly for irrigation and crop protection, and especially in circumstances of fragmented holdings" (Harris, 1993, p. 1240).

Some Conclusions on Contractual Changes in Land-lease

Even though the magnitude of tenancy has slowly declined in India, it still shows surprising resilience. There has been a gradual emergence of lessees belonging to agriculturally prosperous classes in many parts of the country and some decline in small land holder leasing-in. The decline in tenancy and some increase in its concentration, has contributed to an increase in the concentration of operational holdings. But land-poor lessees still form a large proportion among the lessees, leasing in most of the land. However, in many areas, the core lease relationships have begun to change under the impact of developing capitalist relations. In cases involving large resident lessors and small lessees, landlords have often assumed greater accountability of the production process through greater cost sharing of modern inputs, and a greater role in decision-making. At the same time, other new forms of lease relationships have also become more significant in which the tenant is virtually reduced to a piece-rate labourer with the proviso that he shares the risk, while at the same time the landowner's supervision costs are minimised.

EMERGING CONTRACTUAL RELATIONS IN AGRICULTURE LABOUR

The emergence of the agriculture labour force in India has been enmeshed in the social division of labour sanctified by the caste system and the *jajmani* system (Kumar, 1965; Patnaik, 1983; Kalpana Bardhan, 1983). The colonial period saw an enormous increase in the labour force, not only through demographic increase, but through pauperisation of the peasantry and the artisans. Emigration, limited opportunities of non-agricultural employment and expansion of the labour force resulted in loosening of the hereditary ties of dependence but these were replaced to some extent by credit bondage (Patnaik, 1983). Chattopadhyay (1972) shows that by

the turn of the 20th century, while a large proportion of the agricultural labour force continued to be 'unfree', there was a non-negligible proportion which could be called 'free' and this proportion probably grew with increasing commodity production and appropriation of the peasantry from land. Patnaik has argued that the absence of alternative opportunities, the labour force continued to be largely servile, and there was no crucial difference between the extraction of surplus from a labourer at low wages, or a direct producer in the form of high pre-capitalist ground-rent, since the claim to surplus arose from a monopoly of landownership (Patnaik, 1972).

The issue of the emergence of a 'free' labour force has been hotly debated in India in the context of capitalist transformation of Indian agriculture. The other issue which has been discussed is the growth of a 'generalised' and homogenised' labour force, i.e., one which is characterised by the absence of fragmentation, segmentation, immobility and personal dependence. A related, though important, issue is the emergence of new contractual forms which labour-employer relations have assumed in the context of changes in the class-reproduction strategies of both classes.

The Backdrop: Changes in Agricultural Labour and Rural Workforce

Since the last several decades, there has been a steady casualisation of the rural workforce and increase in agricultural labourers. The percentage of casual male workers among rural male workers has steadily increased from 22.0 per cent in 1972-73 to 33.8 per cent in 1993-94. The percentage of casual female workers has also steadily increased from 31.4 per cent to 38.7 per cent over this period (Visaria, 1999). While the proportion of casual workers is higher for female workers, the proportion of regular female workers is much lower (Visaria, 1999).

The casualisation of the workforce has been accompanied by a high rate of proletarianisation of rural households. There has been a steady growth in the percentage of rural labour households (households deriving their major income from wage labour) to total households - from 25.4 per cent in 1964-65 to 39.7 per cent in 1987-88 (Rural Labour Enquiries). The number of agricultural labourers has increased at a rate higher than the population growth rate (3.69 per cent between 1961-1991 on the basis of Census estimates and 2.54 per cent between 1964-65 and 1993-94 on the basis of RLE estimates). As a result, the proportion of agricultural labourers in the rural workforce has been expanding (from 18.9 per cent of the rural workforce in 1961 to 31.1 in 1981 and 32.7 in 1991, inclusive of marginal workers). This growth has taken place against a background of relatively low absorption in agriculture and signs that the backward areas may have entered a phase of labour-saving agricultural growth earlier than regions which first experienced agricultural intensification (Kalpana Bardhan, 1989; Bhalla, 1988).

The gender and social composition of the agricultural labour force has also been undergoing a change, though conceptual issues, problems of comparability of estimates and underestimation of female labour makes macro-comparisons problematic. Among Census categories, female-male ratios are the highest for

agricultural labourers (exceeding 1 for the states of Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Tamil Nadu for main and marginal workers in 1991). Sex ratios among agricultural labourers show an increase for all states, excluding Bihar, Madhya Pradesh and Uttar Pradesh, between 1961 and 1981 (Duvvury, 1989). During 1981-91, sex ratios of agricultural labourers show a further increase from 0.81 to 0.85 at the all-India level as well as in most states (except Kerala and Punjab, Bihar, where the decrease is marginal, and Andhra Pradesh, where it still remains well above). Regions with a high incidence of female agricultural labour belong to both high and low productivity regions, a variety of agro-ecological conditions and cropping pattern (paddy, millets). Duvvury (1989) finds that female agriculture labour incidence appear to be correlated to area under paddy and selected commercial crops known to be biased towards female labour (chillies, tobacco, cotton). Several micro-studies show that with employment diversification of the (male) rural workforce, female wage work has become more predominant.[6] Male-female wage differentials declined till 1987-88 but have stagnated thereafter.[7] There is also a wide variation in the proportion of the SC/ST among agricultural labourers across states and with increasing proletarianisation, labourers from other castes have also been joining the ranks of agriculture labour in large numbers (Duvvury, 1989, RLE, various years).

The trend towards diversification of the rural workforce since 1972-73 has been widely noticed (see, for example, Hirway and Roy, 1999; Visaria, 1999) but there are concerns that this trend has slowed down or reversed since 1990-91 (Bhalla, 1997; Gupta, 1999). The percentage of male rural workers in the primary sector declined from 83.7 per cent in 1972-73 to 75.3 per cent in 1987-88. The rate of diversification slowed down between 1987-88 and 1993-94 with only a small drop in male workers were reported to be in the primary sector (from 75.3 per cent to 74.7 per cent). Female workers showed a similar, though slower, trend towards diversification. With the percentage of primary sector to total workers declining from 89.9 per cent in 1972-73 to 85.2 per cent in 1987-88. But between 1987-88 and 1993-94, the percentage of female workers in the primary sector actually increased to 86.5 per cent. Notably, both for males and females, a sharp decline took place in this quinquennium in the percentage of workers in the secondary sector (from 12.1 per cent to 11.2 per cent for male workers, and 10.0 per cent to 8.3 per cent for female workers).

Evidence has been adduced from the Rural Labour Enquiries to show increasing diversification of their sources of income and smaller dependence of agricultural and non-agricultural wage employment and income. Unni (1997 b) notes that both the percentage of wage earners to total earners and the percentage of wage employment days to total full employment days have been falling over time in rural labour households reflecting greater diversification of employment/livelihood among such households. The RLEs show that at the national level, the proportion of rural labour households with cultivable land has not changed much between 1964-65 and 1993-

EDUCATION AND AGRICULTURAL PRODUCTIVITY

The impact of education on agricultural productivity is generally envisaged through innovative, allocative, worker and even external impacts. The innovative effect emanates from the possible usefulness of schooling in relation to 'receiving', 'decoding' and 'using' the new information through improved 'communication skills', superior 'contacts' and sharpened 'judgmental faculties' (Ram, 1980). Education enhances the farmers' capacity to maximise the perceived profit function by allocating the resources in a more effective cost-efficient manner, by choosing which and how much of each output to produce and in what proportion to use the inputs - allocative effects (Jamison and Moock, 1984; Tilak, 1993). The central theme of the allocative effect lies in 'evaluating' and 'adopting' the more profitable new 'technologies'. The worker effect includes the ability to perform agricultural operations more efficiently in the economic sense. It is translating the allocative efficiency into production efficiency. The increased capability to process and apply the information is seen through lowering the marginal costs and raising the marginal benefits with the given set of inputs. Education also facilitates the more rapid entrepreneurial adjustments to changes in output and input prices, input availabilities/constraints, and new opportunities, etc.

Given this general framework of the impact of education on agricultural productivity, its measurement is beset with many methodological problems. These generally include working out simple coefficients of correlation/rank correlation, simple and multiple linear and non-linear regression equations, running a set of simultaneous equations with cause and effect relationships inter-changed, measuring the rates of return/internal rates of return, etc. At the simplest level, in India the literacy rate and the growth rate of labour productivity, measured as per capita gross state domestic product are found to be positively associated; the rank correlation across 15 major states during 1991-92 to 1997-98 (1991-98) is 0.52. The association is stronger when the change in growth rate from 1981-91 to 1991-98 is ranked; the correlation being 0.68. Further, it may be argued that the literacy rate is more effective in arresting the decline in the growth rate; the separate rank correlations considering the states with declining and increasing growth rates separately are 0.80 and 0.65 respectively.[1] This means that the states with the declining growth rates need to invest more in education (improving literacy) even with a higher priority.

Technical change, universally accepted to be the best strategy is significantly influenced by the non-price factors like government investment in agricultural research, education extension and infrastructure like rural roads, regulated markets, etc. (Evenson and Jha, 1973; Rosegrant and Evenson, 1994; Kumar and Rosegrant, 1994). That the literacy would enable the farmers to improve efficiency of farming is obvious for it would enable them to be more scientific in the application of various (new) inputs. And its ranking among as many as 10 variables affecting the total factor productivity from 1966-67 to 1989-90 for India was third, next only to government expenditure on agricultural research, education and crop production programmes; and

the inequality of land distribution (Desai and Namboodiri, 1997). In a more comprehensive simultaneous equation model of the total factor productivity being affected by the adoption of high-yielding varieties (HYVs) and the latter being affected by education (along with other variables) showed that literacy explained as much as 26.6 per cent and 12.9 per cent of the total factor productivity growth of sorghum and rice respectively; for wheat, the rate of adoption of HYVs itself having reached to the ceiling levels, the effect was non-significant (Kumar and Mittal, 2000). Thus it should be recognised that measuring the impact of education through only the adoption of HYVs (expressed as per cent area under HYVs) is a gross injustice because it neither captures the adoption of relatively newer HYVs nor the better rational use of other modern inputs on HYVs, etc. Nevertheless, the important role of rural education for promoting technical change is suggested and this should be in the nature of more functional professional literacy.

There are many farm-level production function studies with education of the farmer as one of the explanatory variables. These studies show that the level of farm production is significantly higher on farms where the decision-maker is literate than where the decision-maker is illiterate. This was reported for Haryana where it was also found that the impact of the level of education on farm production is relatively strong with secondary education and weak, though positive, with both primary and middle education (Singh, 1974). The percent increase in farm production at geometric mean level of other inputs due to the literacy was found to be 19.1 per cent; it was 15.1, 19.7, and 47.9 per cent if the farmer had primary, middle and secondary level education respectively – all the coefficients were significant at 5 per cent level. This underlines the importance of sustained formal education up to a minimum of secondary level were we to expect a wide scale change in the farmers' production behaviour. Similarly, the profit functions for farm level data for paddy in Tamil Nadu also showed that the educated farmers are technically and allocatively more efficient and that the contact with the extension service significantly increases profit (Duraisamy, 1988).

A closely related issue is the education of the worker (agricultural labourer) vis-à-vis that of the cultivator. The coefficient of cultivator schooling (of elasticity of output), and of the degree of inefficiency in the use of chemical fertilisers were significant with signs as expected whereas those of schooling of agricultural labourers were not significant, and sometimes even with opposite sign (Ram, 1980). Certainly, the production related information is more valuable to farm operators who take the relevant input–output decisions than to hired hands, i.e., the farmers have allocative functions to perform, while the latter typically do not. However, this is like living on the knife-edge of existence. That is, if a man believes that his son is going to spend his life putting a stick in the ground and putting a rice seed in the hole and then harvesting the rice, reading and writing are superfluous skills. The first problem, therefore in such situations is to somehow convince the farmer that change is possible and that it is not necessarily dangerous (Villasenor, 1965).

94, although some of the intermediate years (1974-75, 1977-78 and particularly 1987-88) show a higher proportion of rural labour households with land. However, there is a larger proportion of rural labour households with access to land in many states (e.g., Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Punjab, Rajasthan. Uttar Pradesh and West Bengal) show a higher proportion of wage labour households with cultivable land. But while the proportion of absolute landlessness has also not increased much (9.6 per cent of rural households in 1971-72, 11.3 per cent in 1982 and 11.5 per cent in 1992), the proportion of households owning less than 0.2 hectares of land (the semi-landless) and marginal landowners (owning less than 1 hectare of land) has increased (Unni, 1997 a).[8]

An important feature is the increased mobility of wage labourers, both through short duration migration and commuting, which is significantly underestimated by the macro surveys. The 1991 Census records 1.36 million short duration migrants for economic reasons. However, the National Commission on Rural Labour (NCRL) 1991 estimates more than 10 million seasonal or circular migrants *in the rural areas alone*. A number of studies show increased seasonal labour migration and commuting (for a review, see, Srivastava, 1998). The NSS shows that labourers migrate for employment both in the wage and non-wage sectors, bringing down the proportion of wage labourers in the migrant workforce after employment (Srivastava, 1998). Labour mobility has important implications for the labour market in both sending and receiving areas.

Issues of Freedom versus Unfreedom of Agricultural Labourers

Since any contract binds the parties in exchange with respect to specified obligations for the duration of the contract, it is arguable whether the mere existence of a long-term contract in or 'interlocking;' of land-labour-credit-produce markets constitutes 'unfreedom' (Bardhan and Rudra, 1978, Thorner and Thorner, 1962, Bardhan, 1980). But elements of 'unfreedom' can be shown to exist in situations where (an unequal) relationship is defined by custom, tradition or extra-economic coercion by members of a more powerful class ('extra-economic' factors) and the labourer has no, or limited, freedom (or has yielded the freedom) to negotiate the conditions of employment (Thorner and Thorner, 1962). Even where the initial conditions of the relationship are contractual, there may be cases where these may involve the labourer or his family in a regressive dynamic, either amplifying the labourer's obligations well beyond the scope of the contract or making further renegotiation of the contract virtually impossible. As Bhaduri has shown in his theoretical models (Bhaduri, 1984) and Bharadwaj (1979) has forcefully argued, certain types of contractual relations (e.g., interlocked relationships) have regressive dynamic consequences which cannot be easily envisaged in the initial contract. Bharadwaj (1979, 1985) shows that where there is a limit on exploitation in any one market due to convention, tradition or economic factors, interlocked relationships enable the dominant party in the exchange to extend exploitation, and lead to the

shrinkage of feasible choices faced by the weaker party, resulting in the segmentation and underformation of markets, chiefly of land and labour. Srivastava (1990) has argued that in order to determine the impact of 'interlinked' or otherwise supposedly 'unfree' relationships on capitalist development, the specific form of the contractual relationship has to be considered in its totality.

Thorner and Thorner (1962) have focused on three types of 'unfree' labour relations – the long-duration relations, the 'beck and call' relationship, and the system of 'forced' free or underpaid labour of tenants – each of these forms being underpinned by a relationship of dominance and dependence. However, even casual labour and other forms or labour relations (e.g. contract) may not be free from traditional and extra-economic features, or face the kind of regressive dynamic described earlier. Below we focus first on changes in contractual relations in long duration contracts.

Changes in the Nature of Long-Duration Labour Contracts

In focusing on long-term labourer-employer relationships in post-colonial agriculture, one may like to understand the extent to which these arose out of traditional or customary relationships, or were born out of forms of debt-bondage, which emerged during the colonial period, reinforced by vestiges of 'custom', or have their genesis in the requirements of capitalist agriculture. Many forms of labour attachment described by Thorner and Thorner (1962) and discussed in the First and Second Agriculture Labour Enquiry Committee Reports bear predominantly traditional features which subsume loan and land-lease relationships. On the other hand, the relatively well-studied debt-bondage relationships in Palamau appear to belong mainly to the second category (Mundle, 1979). The customary elements in such relationships have been under pressure in different regions of the country for a number of reasons and traditional forms of long-duration relationships have shown a tendency to decline.[9]

By and large, unfree long-term relationships, with traditional features, have virtually disappeared from many parts of the country which have experienced relatively rapid capitalist development as well as occupational diversification, while the incidence of such relationships has also declined in other areas. But long-duration employer-employee relations, of both free and unfree nature have also existed in agriculturally developed areas.[10] Indeed, it has been argued that attached labour may tend to rise with capitalist development in agriculture in order to meet the need of employers to secure peak-season labour and other all-year round labour requirements (Bardhan and Rudra, 1981; Bhalla, 1976; Bardhan, 1984). There is a debate as to whether attached labour in developed agricultural labour forms a superior and free class of labour, or whether such labour is characterised by 'unfreedom' and relatively low returns. The National Commission on Rural Labour (1991) which compares the 'naukar' system in Haryana and Meerut, finds that in lieu of an initial loan, the 'naukar' in Haryana is compelled to accept a contract which has several unacceptable

features (including low wages) and which imposes severe constraints on his freedom. Jodhka (1994) describes the system as one of 'labour' mortgage. The main features underpinning such unfreedom are the absence of alternative opportunities and class domination (NCRL, 1991; Jodhka, 1994). The articulation of poor agrarian regions with regions of capitalist development through labour migration often also enables agrarian capitalists to impose poor working conditions and degrees of unfreedom on migrant labourers, even though local farm servants may enjoy superior working conditions (Srivastava, 1999). However, unfreedom is not a necessary or even a predominant characteristic of long-duration labour contracts in developed agricultural regions and there is evidence from a number of regions to show that the terms and conditions of such contracts reflect the differentials skills and productivity of workers and are essentially free (Srivastava, 1990, 1996; NCRL, 1991). Thus, long-duration labour contracts fulfil a number of functions in developed agriculture and are sometimes characteristised by unfreedom of the labourers. One can envisage a "U" relationship between development and attachment (with the nature of attachment itself undergoing changes, and so also the functions to which this attachment is geared) (Srivastava, 1996).

Interlinkage of Labour with Other Transactions

Relationships between casual, daily labourers and their employers are often not restricted to purely contractual relations in the labour market but are influenced either by custom, tradition and other 'extra-economic' factors, as well as by 'interlinkages' of labour contracts with contracts in credit, land or product markets. In precapitalist agriculture, employer-employee relationships may not exist solely, or even mainly, in the labour market, but may extend from land, credit or other contracts. It is now widely accepted that the nature of rural transactions cannot be fully understood without explicitly taking into account the nature of the interrelation between different strategies of surplus appropriation ('interlinkage'). This understanding is now deeply imbued in both classical and neoclassical explanations concerning the nature of rural markets or their dynamics. This literature has been surveyed by us elsewhere (Srivastava, 1990).

The nature, magnitude and consequences of interlinkages between labour and other markets has been hotly debated. A number of articles have shown that interlinked contracts are small in number in different areas of study (e.g., Lanjouw and Stern, 2000; Kapadia, 1996). In other studies (e.g., Corta and Venkateshwarlu, 1999) most labour transactions are interlinked with other (land, credit or produce transaction). There is also a debate on the nature of interlinked transactions and their implications for capitalist development (Srivastava, 1990). We have argued that the interlocked relationships arise out of a prior set of production relationships and the strategies of subsistence or accumulation of different classes which may themselves change under certain conditions (Srivastava, 1990). In traditional agriculture,

personalised relations have been shown to be antecedent to interlinked transactions and not the other way around (Srivastava, 1990).

Bardhan and Rudra (1978) have shown that interlinked transactions are higher in agriculturally developed areas. Bardhan (1983) has linked labour-tying (involving credit-labour linkages) with the needs of agricultural employers to secure labour at peak times. Following this, other studies have also shown that interlinkage of labour with other transactions are higher in areas of agricultural intensification and could serve several objectives for employers, including the fragmentation and segmentation of the labour force (leading to personalised relations), labour control, lower costs and securing labour availability. On the basis of her study in Chittoor district of Andhra Pradesh, Corta and Venkateshwarlu (1999) find that agrarian capitalists have reacted to labour tightening through tightening control in credit, land rental, product (commission buying) and labour (tying). Under the tied labour arrangements, they extend credit and/or garden plots of wet land to labourers on the condition that they work for them at lower than market wages. During the period under study (1970 to 1995), tied labourers increased from 32 to 40 per cent. Almost all capitalist farmers had one or two labourers tied through loans or leasing out of half-acre paddy plots on half-half share. In the case of loans, labourers (and their women folk) were expected to work out their loans through priority work at low pre-fixed wage, while also having to perform several unpaid tasks. In the latter case, they offered themselves for work at wages which were not pre-determined but were lower than market levels. The tied labour arrangements involved more women then men, which, according to Corta and Venkateshwarlu, could be due to employers turning to a labour force which could be easily disciplined.

The consequences of interlinkages for freedom/unfreedom have been raised by Bardhan and Rudra (1978) and Bardhan (1980) who claim that these relationships are no different from relationships prevailing in industry. This not only denies the role of extra-economic factors (custom, caste-based relationships, etc., in the case of traditional agriculture, and extra-economic coercion and dominance) in shaping interlocked relations, but also that the regressive dynamic resulting from the initial interlocking could lead to a loss of freedom. In reality, interlinkages not only facilitate the appropriation of surplus in more than one market for agricultural employers, they may restrict mobility (once "choices" have been made) for the weaker classes, and place relative constraints on the functioning of the labour market. In the ultimate analysis, as Bharadwaj (1985) and several others (Bhaduri, 1973 b; Chandra, 1974; Patnaik, 1983, 1986) have argued, the persistence of certain forms of surplus appropriation, arising out of both extra-economic and economic factors, results from lack of alternative subsistence strategies for very large numbers of the poor and may lead to more adverse forms of interlocked relationships. If there are alternatives available, evidence shows that the poor preferentially withdraw from relations leading to personalised dominance and unequal (relative to prevailing)

arrangements (Srivastava, 1990; Jodhka, 1994; Jha, 1997; Corta and Venkateshwarlu, 1999; Wilson, 1999).

The evidence on interlinked contracts shows that in traditional agriculture, interlocking is the result of personalised relations, which emanate from pre-existing social relations. The objective of such interlinkage is to secure maximisation of surplus through rent/labour/credit. With the development of capitalist relations, there is a shift in orientation in interlinked transactions which are increasingly geared towards maximisation of surplus through labour by reducing costs and control of labour.

Changes in Contractual Relations and Wage Payment Systems of Casual Labour

Several features of agrarian labour markets have received considerable attention in the theoretical literature. These include the enormous heterogeneity in the nature of contracts with regard to duration, payment systems, associated and interlinked conditions, the payment of a common wage for similar tasks despite knowledge of differences in attributes between workers; co-existence of positive wages with surplus labour; isolation of the village labour market, fragmentation, and segmentation of labour market by caste or sex, etc. We have reviewed this literature elsewhere (Srivastava, 1990, 1996, 1999; also Kalpana Bardhan, 1983, 1989; Binswanger and Rosenzweig, 1984). We focus in this section on the emerging changes in contractual labour relations in Indian agriculture. The key issue in this connection is the extent to which labour relations continue to be personalised, fragmented, isolated and segmented, thus impeding the growth of a generalised labour market. A related issue is the extent to which changes in the labour market reflect the changing requirements of the agricultural employers and the labouring classes.

We deal first with the issue of notional boundaries of the agricultural labour market. The issue of isolation of the rural labour markets has been raised by Rudra (1982) and by Bardhan and Rudra (1985, 1986). But while the former stresses extra-economic coercion, patron-client relationships, and labour control strategies as key elements in bringing about isolation, the latter stress interlinkages and economic factors as leading to isolation. Rao (1988) has stressed on the role of transactional and informational economies in intra-village exchanges in producing the bias towards village autarchy. The issue of village labour boundaries has also been discussed in a number of other studies which also support this characterisation of the agricultural labour market (Mukherjee, 2000; Jha, 1997, Srivastava, 1996).

Most studies which have stressed on the phenomenon of isolation are based in the eastern states. Isolation does not emerge, however, as a significant factor in the analysis of labour markets in other regions (Athreya *et al.,* 1990; Ramachandran, 1990; Kapadia, 1996). Moreover, many recent studies, find that there are various elements at work which are undermining the isolation of rural labour markets isolation (Srivastava, 1999; Wilson, 1999). Improvements in road infrastructure and

transport facilities have reduced transactions and information costs and enlarged the area in which agricultural labourers seek work. Moreover, increase in labour mobility and diversification of employment opportunities are often a key factor in shaping worker expectations regarding agricultural wages which is also leading to a decline in wage level variability between proximate villages. Village autarchy is more likely to be a feature during lean seasons when the worker availability is not problematic and knowledge about worker/employer attributes is likely to outweigh advantages in dealing with unfamiliar labourers, than in the peak season when the labour market is tight and timeliness of operations is a necessity (Kapadia, 1996; Jha, 1997). Large-scale inter-village mobility of labour during peak seasons (harvesting, cane-tying and cutting, paddy transplanting, cotton picking, potato digging, etc.) are now a feature in many regions and are accepted by local workers as a routine feature of local labour markets.

Personalisation, fragmentation, and segmentation of the agrarian labour market are some of the other characteristics of the agrarian labour markets which restrict labour mobility and influence wages. Rudra (1982) puts forward a set of interrelated formulations regarding the process of rural wage formation, arising from the evidence collected from surveys in Shantiniketan villages during 1979-81. Apart from the isolation of the village labour market, the basic premises are that the labour force is subject to extra-economic constraints which restrict mobility and lead to segmentation, and that this segmentation is further cemented by patron-client relationships. The actual wage level (relationship) is, therefore, determined in diadic relationships. Wage determination takes place through an implicit bargaining process which determines the floor wage (the prevailing wage) whereas seasonally peaked demands for labour determine the fluctuations.

As discussed earlier, personalised and fragmented labour relationships are features of traditional agriculture, but they can also result from employer strategies and interlinkage of labour and other transactions. Even though the extent to which labour relations bear these features and influence returns to labour is a matter of empirical verification. But the interesting issue is that there is a commonly understood prevailing wage level within village boundaries, and digressions from this are considered to be deviations from established norms. This implies that despite fragmentation and personalised dependence, labour market outcomes are not entirely individual and labourers and employers have a common class-based understanding regarding prevailing wage levels. Not only this, wage bargaining could be initiated between individual employers and employees and is often implicit, but it does take into account class based solidarities and responses. What is being argued here is that fragmentation and personalisation has not been able to impede the emergence of wider class solidarities and there are now numerous instances of labourers striking work for higher wages even in areas where there are no organisations, transcending factors leading to personalisation and segmentation (Jha, 1997; Srivastava, 1999; Wilson, 1999). In fact, this inevitably results in a decline in such factors, as labourers

resist factors leading to personalised dependence, and employers withdraw from the land-lease or credit markets.

The segmentation of the agrarian labour markets on the basis of caste, gender, location, etc., is another persistent feature of these markets. While a number of studies have described the segmentation of village labour markets on the basis of gender, few studies have analysed the implications of the gender-based division of labour and the (changing) gender composition of agricultural labourers on overall labour market dynamics. Since men (both within employer and labourer households) tend to undervalue women's productive labour, female labour, and tasks associated with female labour, are underpaid in comparison to males in most areas. Thus the changing gender composition of the agricultural labour force works to the advantage of the employers. Corta and Venkateshwarlu (1999) has argued that male resistance to personalised labour conditions and expansion in non-agricultural opportunities for them has led the employers to tighten control over other markets (land-lease, produce, etc.). But at the same time, a smaller proportion of the male earnings is ploughed back into family subsistence, which has increasingly become a female responsibility. Thus, women have occupied niches in unfavourable labour relations earlier occupied by men and employers favour this development as they find a largely female labour force cheaper and easier to discipline. This had led to a higher proportion of tied labourers among women than among men. However, while the context in which the male and female labourers operate continues to be different, the role of female agricultural labourers in reshaping unfavourable labour relations is not dissimilar to men.[11]

An important characteristic of the rural labour markets is the observed heterogeneity of wage payment systems. Of particular interest is the transition from kind to cash payments, denoting increasing monetisation and commercialisation, and the difference and transition between time-rates and piece-rates. Piece-rates as being more favourable to the development of capitalism as compared to time-rates but are compatible with both low and high levels of capitalist development. The attractiveness of piece rates arises from the fact that they increase the work intensity of the labourer while at the same time lowering supervision and wage costs.[12] While piece rate wage systems have often co-existed with other forms of wage payment, they have been rising over time, often implemented through work-gangs, replacing time-rates and share rates, primarily in time-bound operations requiring large applications of labour such as cane tying and harvesting, cotton picking, potato digging, paddy transplanting, weeding and hoeing.[13] Inter-village studies show that piece-rate wage systems are more prevalent in areas of high capitalist development (Srivastava, 1996, 1999). Breman (1985) has noted a steady expansion over time in in-migrant gang labour in the tying and harvesting of cane in South Gujarat. Piece-rate wages paid show a much greater degree of variance compared to time or share rates indicating that wage settlement and negotiations play a more important role in piece rate payments.

As noted above, piece rate contracts are often implemented through work-gangs in a collective piece rate system. These work-gangs, which may belong to the village or local area or may consist of migrant workers, are now increasingly prevalent and contracts with them are generally, though not always, associated with the payment of piece rates. These contracts are made usually for a small period necessary for the completion of a single agricultural operation. Thorner and Thorner (1962) categorise these contracts as 'free' and cite several examples, involving migrant labour, from the First Labour Enquiry Committee (paddy operations in Quillon, wheat harvesting in the wheat zone of Madhya Pradesh, miscellaneous operations in coastal Orissa).

Since then, there has subsequently been a significant growth in group labour contracts, which has also been in tandem with the increased seasonal migration of workers from the neighbouring areas or over long distances (NCRL, 1991, Vol. II). As Breman (1985) has shown, and several other studies confirm, a significant proportion of such migration is 'organised', in the sense that agents, relatives or kinsfolk play a role in recruitment or facilitation (Breman, 1985; Singh and Iyer, 1985; Mukhopadhyay, 1987). But the nature of the recruitment and facilitation and the terms and conditions of employment of seasonal agricultural labour migrants, can vary quite significantly. Contract migrant and casual labour migrant systems could exist side by side with different costs and benefits for migrant labourers (Krishnaiah, 1997). Migrant workers in agriculture are recruited directly by the farmers themselves or through a chain of contractors or middlemen. There are many examples of the first type of migration.[14] In the latter case, group leaders or agents or contractors recruit workers in the source areas. This form of recruitment may sometimes result in bondedness of the labourers (Gill, 1984; Singh and Iyer, 1985, Breman, 1985). The articulation of developed and relatively backward areas through seasonal migration may, therefore, result in adverse and relatively unfree conditions for migrant labour and somewhat contrasting impacts on the sending and receiving areas. In the sending areas, migration is contributing to a breakdown of the isolated nature of rural labour markets and facilitating the development of a more generalised market for labour. There is an upward pressure on wages and increased mobility has undoubtedly contributed to the improvement in real wages witnessed in the backward regions since the mid-1970s. On the other hand, in the receiving areas, migrant labour operates in a setting in which there is segmentation and fragmentation in the labour market and enables the employers to lower wage costs, exercise greater control over the labour process (Srivastava, 1998).

There are very few detailed studies of the nature of contracts with, and internal structure of local work-gangs, which have also been growing in importance. One of the detailed studies is from Trichur district (Kapadia, 1996) where the task of transplanting is monopolised by women. The work gangs are mono-caste consisting of lower caste Pallar women. News of work comes from the caste Hindus, their irrigation supervisors, or Pallar women who act as the main recruiters. The leader of the group has a greater say than the others on recruitments to the group and in leading

the bargaining. Generally wages were equally distributed and the very young or the old are not allowed to join. Pallar women were quite conscious of their common economic interests and are willing to see their internal conflicts as secondary. Kapadia notes that there has been a steady decline in non-negotiable contracts, typically in the form of daily wage labour, together with a decline in the employer's traditional obligations. Though the collective piece rates are negotiable, the negotiability is generally to the benefit of the employers due to the large labour surplus.

Some Conclusions on Changes in Agriculture Labour Contracts

As shown earlier, in the past few decades, there has been a steady casualisation of the rural workforce and an increase in the number, as well as proportion, of agricultural labourers. The period till the 1980s witnessed some increase in non-agricultural employment, and the proportion of labourers with access to some land remained stable. With increased subsistence possibilities in the non-agricultural sector and higher mobility, primarily for male labourers, more and more female workers in rural areas have been drawn into agricultural labour. At the same time, intensification of agricultural production has occurred and has spread unevenly and there has been greater mechanisation of certain key operations.

On balance, except for some regions, which experienced high labour intensive growth, these contradictory tendencies have not affected employment labour days of agricultural labourers. Even then, fairly important changes have occurred in labour relations which we have been able to map in the barest outline. First, customary and traditional dependent relationships and clientelist ties have been slowly declining. Second, rural and agricultural labour appears to be increasingly mobile and village level isolation of labour markets is weaker than before. Third, however, employer strategies, particularly in the developed areas, have centred on contractual forms and labour control strategies which minimise labour and supervision costs and ensure labour availability. Paradoxically, these contractual forms, which rise in importance with the level of capitalist development, include the segmentation of the labour market and interlinked contracts which place relative constraints on the freedom and mobility of labour. The effectiveness of these constraints, however, depends on the economic opportunities available to labourers as well as the balance of social/political power between the class of labourers and employers.

CONCLUSION: EMERGING DIMENSIONS OF CHANGES IN LAND AND LABOUR CONTRACTS

We have viewed the emerging changes in land and labour contracts in the context of an uneven transition in Indian agriculture characterised by considerable regional disparities, growing partial proletarianisation, loosening hereditary ties with landlords/employers, and some growth in alternative sources of employment, on the one hand, and the growth of a capitalist class centrally concerned with the escalation

in supervision and labour costs and labour availability, on the other. The changes in contracts reflect the class-reproduction strategies of labourers and employers, both internally differentiated, but contracts are naturally heavily influenced by the requirements of the dominant classes. The resultant changes are not always in the expected direction: Tenancy changes have contributed to increased concentration of the operational holdings and small-holder tenancy is slowly being transformed but has remained surprisingly resilient over the years. The labour market shows contradictory features with decreasing isolation and growing casualisation and mobility, accompanied, however, by a fairly high degree of fragmentation and segmentation, particularly in areas of developed agriculture.

NOTES

1. But unlike as in neoclassical models, which posit complete flexibility in land and labour contracts and present production with hired labour or tenancy as a choice between alternative contracts (Binswanger and Rozenzweig, 1984), these alternatives may actually be only hypothetical, due to institutional constraints, which impose a different calculus for decision-making in different social formations.

2. See, for example, Srivastava, 1989; Sharma and Dreze, 2000, Swain, 1999 and Jha, 1997.

3. There are now a number of empirical studies which show (1) the predominance of traditional tenancy relations in poor agrarian regions, (2) transitional situations with the emergence of well-to-do tenants, and (3) predominance of capitalist tenants among medium-large cultivators (see, for instance, Khasnabis and Chakravarty, 1982; Swain, 1999; Srivastava, 1989; Bhalla, 1983). Evidence of increasing concentration in operational holdings is provided by NSS Report 407 on operational holdings.

4. See, for instance, Sharma and Dreze, 2000. Srivastava (1997) has observed that in a Western Uttar Pradesh village studied by him, the half-half share was no longer even the modal share arrangement, having been replaced by the three-quarter/one quarter sharing arrangement.

5. Laxminarayan and Tyagi (1977) find fixed cash rents to be higher in states with a higher proportion of area under the predominance of the plantation economy or commercial crops such as oilseeds and cotton, and lower in paddy-wheat areas.

6. Srivastava (1996) found that in U.P. villages, the employment structure is far more diversified for males than for females. Female labour was mainly confined to agriculture. Female participation rates in agricultural labour were comparable to those of males, and in villages where there was considerable diversification among males, even higher (cf. also Corta and Venkateshwarlu, 1999).

7. On the basis of RLE and AWI data for 1964-65 to 1995, Unni (1997 b) found that the ratio of male to female wage earnings in agriculture declined from 1.7 in 1964-65 to 1.3 in 1987-88. However, the wage disparities ceased to decline after that and stagnated in most states till 1995. In some states, such as Karnataka, the wage gap increased during this period.

8. These various processes (steady increase in casualisation and the proportion of labourers, without a significant decline in their access to land), is what Byres (1981) has called a process of 'partial-proletarianisation' in which wage workers cling to their rural holdings in the absence of rapid growth of alternative non-agricultural employment.

9. Breman's (1974) careful study of the *Dublas* in Gujarat shows how the decline in traditional hereditary dependence took place, and how in certain areas, it came to be replaced by a different form of 'attachment'. Srivastava's (1990) shows the virtual disappearance of the traditional *Hali* system from his area of study in Western Uttar Pradesh and a considerable decline in the importance of traditional *halwaha* and *jeura* relationships in the Eastern U.P. study villages. Wilson (1999) reports a decline in traditional labour attachment in Nalanda in Bihar since the early 1960s. In 1981-83, 41 per cent of the labour households had an attached labourer but this proportion had declined to 26 per cent in 1995-96. Jha (1997) also finds evidence of attached labour in 21 per cent of the labour households in Purnea district of Bihar but also reports variations in the terms and conditions of their contract. Corta and Venkateshwarlu (1999) find that the traditional attachment in their study areas of Chittoor district declined from 24 per cent of male labourers in 1970 to nil in 1995. Kapadia (1996) and Athreya *et al.* (1990) report that hardly any *pannaiyal* (tied) labourers left in Trichurapalli district in Tamil Nadu. The National Commission on Rural Labour, 1991, reports a similar decline in labour attachment in Palamau (Bihar) and Varanasi (Uttar Pradesh).

10. Thorner and Thorner (1962) cite the findings of the First Agricultural Labour Enquiry Committee to show that there was a high proportion of long-duration contracts in coastal Andhra and Punjab.

11. Wilson (1999) shows that women's limited incursion into non-agricultural employment had shaped their expectation regarding agricultural wages and they were in the forefront of the struggles for higher wages. Srivastava (1999) also shows that women had not only actively participated, but had even led wage strikes in Uttar Pradesh. Kapadia (1996) shows that in Trichur, not only were a number of work-gangs exclusively female, women played an active role in mediating for work, bargaining and even striking for better conditions.

12. The implications of the piece rate system have been carefully outlined by Marx (Marx, 1976, p. 693 and Chapter 21). According to him the former method of payment is associated with several qualities. Firstly, the quality of labour is controlled by the work itself. Second, piece wages provide an exact measure of the intensity of labour. Thirdly, the supervision of labour becomes, to some extent, superfluous. Fourthly, it gives rise to a hierarchical system of exploitation. Fifthly, it enables the capitalist to raise the normal intensity of labour. Finally, while wage earnings may become more unequal, the average wage, and wage costs may themselves fall. According to Marx, this form of wage payment may be associated with both lower (e.g., the sweat shops) and higher stages of capitalism. Also, if this form does not enable capitalists to reduce wage costs, he may revert to time wages. Some of these aspects have also been the subject of recent neoclassical literature (for example, Stiglitz, 1976).

13. Athreya *et al.* (1990) find that contract gang labour had been replacing wage labour in Tiruchapalli, and Saith and Tankha (1997) for increasing use of piece rates in their study village in Aligarh, U.P. For a review of several longitudinal studies, see Jayaraman and Lanjouw, 1999.

14. In Punjab, farmers contacted labourers at railway stations or even in the source districts (Singh and Iyer, 1985; Gill, 1984; Chopra, 1995). In Andhra Pradesh, improvement in information over a period of time to both farmers and jobbers led the former to contact the latter through letters (Rao, 1978).

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