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A COMPARATIVE ECONOMY OF LAND TENANCY IN INDIA EMPIRICAL EVIDENCE FROM FOUR STATES *

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It is enormous pleasure and also a matter of great honour for me to be bestowed with the responsibility of delivering the 15th Parthasarathy Memorial Lecture in this 34th National Conference of Indian Society of Agricultural Marketing being held at Dr. Babasaheb Bhimrao Ambedkar University Lucknow. I feel privileged delivering this lecture for many reasons. The utmost one is that Professor Parthasarathy was the external expert for my PhD thesis and this is the best tribute I can pay to my teacher by delivering a memorial lecture in his memory. I am humbled by the society providing me this responsibility. It is also a pleasure for me delivering this lecture as I also belong to the chain of Agro Economic Research Centre/Units one of which was headed for several years by Professor G Parthasarathy. I am humbled also by the fact that luminaries like Professor S.S. Acharya, Professor Yoginder K. Allagh, Professor R. Maria Saleth and other top academicians in the field of agriculture economics have delivered this memorial lecture in the past. I am no match to such eminent personalities but will try to uphold this tradition to the best of my abilities. In the light of ongoing debate on agricultural reforms, it makes sense speaking on the issue of land reforms, especially on the long pending tenancy reforms. Although, much of literature is available on the issue of land reforms, however, there is dearth of literature on comparative economy of tenancy/leased farming, vis-a-vis owner operated farming. The paper presents findings based on primary survey of 341 land leasing/share cropping farmers and 265 owned land cultivators without leasing/share cropping.

BACKGROUND:

At the time of independence approximately 50 per cent of area was under Zamindari system and other intermediary tenures. The remaining area was under Raiyatwari system. In the first few years after independence, most of the intermediary interests were abolished and the whole country was brought under more or less the same kind of tenurial system. The

measures which have been taken to safeguard tenant's rights constitute "tenancy reform" (Appu, 1975). The amended tenancy laws adopted by various states had main objectives of defining tenants, regulating rent, ensuring security of tenure, strengthen landlord's right to resume leased land for personal cultivation, conferment of ownership rights to tenants, giving up tenancy rights with mutual consent,

* Delivered on 17th March, 2021

prohibition of future tenancies, tenant's right of pre-emptive purchase, building up correct tenancy records, to abolish oral tenancies etc.

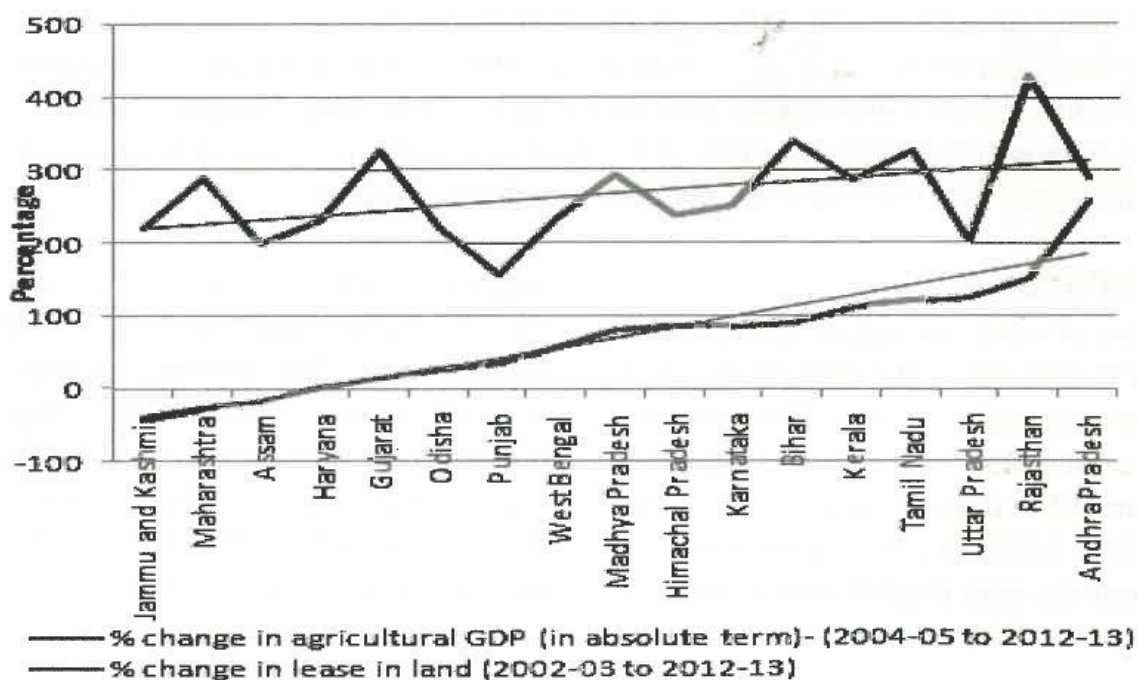
As per the legal status of land leasing, various regions of India are broadly grouped into five categories from legally banned to no legal ban on leasing-out/in land. In some states leasing-out land is permissible for certain categories of landowners like disabled, widows, minors, defence personnel etc. In some regions tenant acquires the right to purchase the leased land from the owner within a specified period of tenancy. In tribal regions, transfer of tribal land to non-tribal persons (even on lease basis) is only permitted by a competent authority. **Annexure Table 1A** shows the nature of restrictions in tenancy laws in different states of India.

After independence the average share of leased-in area was high across the states but

it started declining till 2002-03 and again showed increasing trend during 2012-13. Some states like Andhra Pradesh (10 per cent to 36 per cent), Bihar (12 per cent to 23 per cent), Punjab (18 per cent to 24 per cent), Tamil Nadu (6 per cent to 14 per cent), Odisha (13 per cent to 17 per cent) and West Bengal (9 per cent to 15 per cent) showed a sharp increase in leased-in area by the tenants.

Figure 1 shows some positive correlation between increase in area of lease-in land and agricultural GDP (Nominal GDP) growth of various states of India. Hence it indicates that there is some positive impact of leasing-in land on allocation of land to efficient cultivators and raising productivity of the land. Therefore, bans on leasing-in land existing in some states should be relaxed keeping in mind that marginal and small farmers need appropriate consolidation (Mani, 2015).

Figure 1: Correlation between lease-in land and agricultural GDP (Nominal)



Source: NSSO reports (59th round for 2002-03 data and 70th round for 2012-13 data) and Ministry of agriculture, GOI, for agricultural GDP data (2004-05 to 2012-13).

REVIEW OF LITERATURE:

Bansil (2004) and Haque (2012) argue that land leasing can be an important source of access to land and livelihood for rural poor, if the land lease market is activated by the process of legalisation and liberalisation. In Eleventh Five Year Plan, Central government has already declared to legalize leasing of land in 'limited' manner but still some states have restrictive nature of tenancy laws which hampers the supply of land in lease market.

Deiniger et al. (2007) revealed that land rental restrictions in India had reduced the production efficiency due to impeding access by efficient farmers. His simulation models predicted that with elimination of restrictions on land rental markets 40-70 per cent of efficient producers would get land. Awasthi (2009) revealed that in the Bundelkhand region of Uttar Pradesh, leasing the land was more prevalent among small and marginal farmers compared to medium and large farmers. The small and marginal farmers rented land based on crop yield sharing basis whereas medium and large farmers rented land based on cash rent lease contracts. The output under share cropped lease system was 13 per cent lower than the owner cultivated land whereas the cash rented land yielded 8-10 per cent less productivity with uncoupled investment in variable inputs. The major factors that affected marginal and small farmers to sell the land were uneconomic land holdings and migration to urban centers. The medium and large farmers sold the land for loan repayment purposes and for social ceremonies.

Deiniger and Nagarajan (2009) reported that landlords due to fear of losing the land cultivated it but less efficiently. The states that

were outlawed on rent, kept land fallow even in the main cropping season. The reform legislation allowed the tenants for inheritable security of land from eviction but not the ownership where the tenants had to pay the rent. This prevented both the tenant and the landlord in making land related investments and sub-leasing that further led to decrease in allocative efficiency. This in turn affected the leasing market that de-promoted the productive farmers to access land and unable cultivators to migrate to non-agricultural economy. Besley et al. (2013) opined that the land reforms introduced before and after the states reorganization in southern India favoured relatively wealthier tenants while SC/ST saw decrease in landholdings and depended on agriculture labour income. In turn there was decrease in demand for tenants and increase in demand for agriculture hired labour which increased the agricultural wages. Jayadev and Ha (2015) stated that land reforms in Kerala had neither increased the productivity of crops nor solved the problem of marginal and small farmers. Despite eradicating landlordism the plantation owners turned out to be landlords. The reform failed to access the communities such as fishing. There was decline in paddy cultivators since it was cultivated by small farmers. Lack of maintenance of records failed to fetch information of land holdings exceeding the ceiling limit.

Mani (2015) stated that amongst various terms of lease, the term of lease against share of produce had decreased over the last four decades but was important form of tenancy in Assam and Karnataka. Fixed money as a term of lease had gained importance especially in agriculturally advanced states like Punjab and

Haryana. The leasing-in from relatives under non-specific terms was common in Himachal Pradesh and Kerala. The states such as Andhra Pradesh, Bihar, Punjab, Tamil Nadu, Odisha and West Bengal which showed decline in leased-in area had shown an increasing trend in 2012 that suggest relaxing the ban on leasing-in land. Roy (2016) explained that post 1970 reforms in Kerala abolished landlordism, aroused land fragmentation and marginal farmers increased instantaneously. Coupled with land markets and increase in land value after 1970's converted land to be an asset and was used for speculative purposes.

THE MAIN OBJECTIVE OF THE PAPER:

The NABARD All India Rural Financial Inclusion Survey (2016-17) indicates growing tendency of agricultural households to lease-in land for agricultural uses. As per the survey, at the All-India, 12 per cent households leased-in agricultural land. It was significantly higher in Bihar (28 per cent), West Bengal (27 per cent), Odisha (27 per cent), UP (16 per cent), Telangana (10 per cent) and Chhattisgarh (9 per cent). As per the 70th round of NSSO Report (2013), the share of small and marginal farmers in the total leased-in land was 52 per cent, whereas the share of large farmers was only 7 per cent. Ostensibly, tenancy is under-reported in many states where it is not legally permissible. Legal recognition and formalization of land leasing would enable tenants to access credit, insurance and high-yielding inputs.

Tenancy reforms have the potential to raise agriculture productivity. From the standpoint of equity, small and marginal farmers, having a major share in the area leased-in, would

have greater access to land in case tenancy is accorded legal recognition. Various think tanks and government panels have advocated legalisation of land leasing to bring private investments into the sector and conserve agricultural land. Since 2016, the NITI Aayog has circulated a Model Land Leasing Act to all the states. It has given a flexible template to the states to design state-specific legislations. Rent on leased land, period of lease, etc, have been suggested to be freely negotiated by the parties concerned, i.e., landowner lessors and lessee cultivators without any interference from the government. The reforms, if implemented in the right spirit and with the cooperation of states, can unleash growth of the agricultural sector.

Reforming land tenure and land market system can play a major role in achieving inclusive growth in agriculture. From the efficiency perspective, it would be interesting to see *ceteris paribus*, how productivity of leased-in land compares to that of owner-operated land. Therefore, the main objective of this paper is to compare value of output, cost of cultivation, net returns and price obtained by the farmers under tenancy farming vis-à-vis the owner operated land termed in this paper as control group operating on the owned land without any leasing-in or leasing-out cultivable land.

DATA BASE AND METHODOLOGY :

The study is based on a primary survey. The sample consists of two states in the north and two states in the south. In the North, Punjab and Haryana and in the South, Karnataka and Andhra Pradesh (including Telangana) were selected for carrying out this study. At the aggregate, 341 land leasing or share cropping

farmers and 265 control group farmers without any lease/share cropping were selected for this study. Information was collected about land leasing/land sharing farmers in the selected villages in each state. Based on this list, farmers were chosen by the 'Stratified Random Sampling Method'. Keeping into mind making comparison of lease and control farmers, the latter were selected in the peripheral areas with a similar cropping pattern as that of lease farmers. It was tried to give proportionate representation to different size classes while selecting the sample farmers. The reference period of the data belongs to kharif season 2015 and rabi season 2016, i.e., November 2015 to October 2016.

HOUSEHOLD CHARACTERISTICS AND DETAILS OF OPERATIONAL HOLDINGS:

The numbers of households selected in each state by leasing-in/share cropping and control group and their area operated per household is provided in **Table 1**. At the aggregate, a total number of 606 households were selected from the four states. It is to be pointed out here that the selected households in Andhra Pradesh belong to erstwhile Andhra Pradesh which now is divided into Andhra Pradesh and Telangana since 2nd June 2014. As in most of

the cases, tenancy existed only in terms of cash payment on seasonal or yearly basis and tenancy in terms of share cropping was almost non-existent or existed to a limited extent, the two categories are clubbed together for the sake of preserving numbers of observations. Therefore, our analysis primarily consists of leased-in and control groups, while the latter includes those households who operated purely on their own land without any area leased-in or leased-out. The numbers of leased-in farmers surveyed was 341 with highest numbers in Haryana and Punjab 138 and 136, respectively and 59 in Andhra Pradesh while only 8 farmers belonged to leased-in in Karnataka. Similarly, the control group farmers not having any leased-in or share cropped land was 265 with 93 farmers from Karnataka, 68 from Haryana, 63 from Punjab and 41 from Andhra Pradesh. The leased-in farmers operated 13.8 acres per household whereas the control group farmers operated only 5.6 acres per household. At the aggregate, the average holding size was 10.2 acres per household with operational holding size highest in Punjab 14 acres followed by Haryana 13 acres, Andhra Pradesh 4 acres and Karnataka with lowest holding size of 3 acres per household.

Table 1:
Households selected and their area operated in acres/hh

Farm size	Leasing-in		Control group		Sum total	
	HH	Acres/hh	HH	Acres/hh	HH	Acres/hh
Andhra Pradesh	59	4.80	41	3.60	100	4.31
Haryana	138	15.30	68	8.10	206	12.92
Punjab	136	16.70	63	8.20	199	14.01
Karnataka	8	3.31	93	3.00	101	3.02
Aggregate	341	13.77	265	5.64	606	10.21

Table 2 presents operational holdings of selected farmers in the four states. The average operated area was much higher in Punjab and Haryana compared to Andhra Pradesh and Karnataka. Not only the size of owned land was higher but the proportion of net leased-in land was also much higher in Punjab and Haryana compared to other two selected states. The size of owned land per household was 2.9 and 2.4 acres, respectively in Andhra Pradesh and Karnataka while it was 4.85 acres in Haryana and 4.03 acres in Punjab. Similarly, net leased-in land was less than one acre in Andhra Pradesh and Karnataka while in Haryana net leased-in land was around 8 acres and in Punjab it was around 10 acres per household. The share cropping existed in small quantity only in Haryana. Most of the leasing-in land was in terms of short-term lease not exceeding one year while miniscule cases were found of long-term lease of two years or more. Out of net operated area of around 10.2 acres around

9.8 acres were irrigated which consists of around 96 per cent operated area irrigated. While in Punjab and Haryana almost whole operated area was irrigated, in Andhra Pradesh 78 per cent operated area was irrigated and in Karnataka around 82 per cent operated area was irrigated. Whereas in Punjab and Haryana, generally percentage of irrigated area is the reflection of the actual situation, in Andhra Pradesh and Karnataka our sample area is much higher irrigated than the state averages because of our purposive sampling. The cropping intensity was almost two crops in a year per acre in Haryana and more than two crops in Punjab compared to much less than two crops in Karnataka and near one crop in Andhra Pradesh. Whereas in Karnataka and Andhra Pradesh percentage irrigated area and cropping intensity was higher among marginal and small farmers compared to large farmers, in Punjab and Haryana there was no significant difference between small and large farmers.

Table 2:
Characteristics of operational holdings (acres per household)

Particulars	Andhra Pradesh	Haryana	Punjab	Karnataka	Aggregate
Owned land	2.88	4.85	4.03	2.37	5.20
Net Share cropping	0.00	0.26	0.00	0.00	0.06
Net short term lease	0.72	7.52	9.97	0.28	4.60
Net long term lease	0.14	0.05	0.00	0.08	0.07
Fallow and current fallow	0.53	0.22	0.01	0.27	0.26
Pasture land	0.04	0.02	0.00	0.02	0.02
Net operated area (acres/hh)	4.31	12.92	14.01	3.02	10.21
Net irrigated area (acres/hh)	3.34	12.70	14.00	2.49	9.78
NIA as a % of NOA	77.45	98.30	99.90	82.44	95.83
Gross cropped area (acres/hh)	4.91	25.08	29.42	5.18	19.59
Cropping intensity	113.82	194.12	209.96	171.50	191.85

Looking at the tenure of leasing-in and leasing-out as displayed by **Table 3a** and **3b**, net leased-in area at the aggregate was around 4.6 acres and it was mostly irrigated area and the tenure of lease was mostly short term. State wise, lease-in area varied from less than half an acre in Karnataka, one acre in Andhra Pradesh around 8 acres in Haryana and 10 acres in Punjab. The rent paid for leasing-in per acre on average was Rs 14 thousand in Andhra Pradesh, Rs 16 thousand in Karnataka, Rs 34 thousand in Haryana and as high as Rs 41 thousand per acre in Punjab for the cultivation of land for one year. Although long term lease was only in miniscule

cases* but it did exist and has important implications for this study. Although, the area under long term lease was very small, however, it indicates the existing tenure of long-term lease and present a comparative picture of long-term rent on which the leasing had taken place.

It is observed from the data that tenure of long-term lease varied from around 2.6 years to 7.7 years and it averaged slightly above three years. The rent for long term lease was significantly lower compared to short term lease. Long term rent per acre on annual basis was around Rs 9.5 thousand in Andhra

Table 3a:
Tenure of leasing-in and prevailing rate of leasing-in land

States	Short term lease-in		Rent paid (Rs per acre)	Long term lease-in		Rent paid (Rs per acre per year)	Duration of lease (years)
	Irrigated (acres per hh)	Un-irrigated (acres per hh)		Irrigated (acres per hh)	Un-irrigated (acres per hh)		
Andhra Pradesh	0.67	0.06	14442	0.123	0.016	9597	2.62
Haryana	7.61	0.008	33766	0.046	0	16413	7.67
Punjab	10.1	0.00	40910	0	0	0	0
Karnataka	0.24	0.03	15974	0.078	0.002	9260	3.52
Aggregate	4.63	0.021	36604	0.062	0.004	10732	3.37

Table 3b:
Tenure of leasing-out and prevailing rate of leasing-out land

States	Short term lease-out		Rent received (Rs per acre)	Long term lease-out		Rent received (Rs per acre)	Duration of lease (years)
	Irrigated (acres per hh)	Un-irrigated (acres per hh)		Irrigated (acres per hh)	Un-irrigated (acres per hh)		
Andhra Pradesh	0.008	0.001	14105	0	0	0	0
Haryana	0.099	0	31960	0	0	0	0
Punjab	0.096		37135	0	0	0	0
Karnataka	0	0	0	0.02	0	11821	3.13
Aggregate	0.051	0.0005	33505	0.0051	0	11821	3.13

Pradesh, Rs 9 thousand in Karnataka and Rs 16 thousand in Haryana while in Punjab no long-term lease was observed. The long-term rent was around 66 percent that of short-term rent in Andhra Pradesh, less than half in Haryana and around 58 per cent in Karnataka. At the aggregate long-term rent was only 29 per cent that of short-term lease rent. Similar was the case of leasing-out land as presented in Table 3b. Although instances of leasing-out land were very few in our sample, but few cases existed for short term leasing-out in Andhra Pradesh, Haryana and Punjab and long-term leasing-out in Karnataka. The rent for short- and long-term leasing-out was mostly similar to that of short- and long-term leasing-in. On average, rent for short term leasing-out was Rs 33.5 thousand per acre and long-term leasing-out was only Rs. 11.8 thousand per acre and the latter was only 35 per cent of the former.

This phenomenon of rise in the duration of tenancy leading to decline in rent has long term implications for the tenants as it gives opportunity to small holders to make their holding size more economical by leasing-in land if provisions are made for long term lease. The possible reason for decline in land rent at longer interval of lease could be such long-term lease gives landlords more security for their holdings and they can plan alternate options for themselves. We observed existence of reverse tenancy among the selected households in all the four states. It is seen from leasing-in and leasing-out trends that medium and large farmers leased-in more land compared to small and marginal farmers possibly to economize their size of holdings and making appropriate use of existing machinery with them.

Table 4 presents details about the crops grown under lease among the selected lease farmers in the four states. The share of leased area in the total gross cropped area by leased farmers was 51 per cent in Andhra Pradesh, 31 per cent in Haryana, 33 per cent in Punjab and 37 per cent in Karnataka. At the aggregate, only 1/3rd area by leased farmers was actually leased-in for which they paid rent and cultivated it as tenant farmer and rest of 2/3rd area was their owned area. It is interesting to see the nature of crops grown under leased-in crops. In Andhra Pradesh, only two crops were grown on the leased land, i.e., cotton and dry chillies while in Karnataka only few cases of leasing-in were available who grew, tomato, green chilli and baby corn. In Haryana, the main crops grown on leased land were usual wheat and paddy which occupied around 78 per cent of the leased area. The other crops grown were mustard, barley and potato. In Punjab, the main crops grown on leased land were potato, paddy, wheat, peas and barley. However, cropping pattern of leased farmers was not much different from the control group farmers as is discernible from the table.

Tables 5a and 5b present resource usage and net returns per acre for leased and control crops, respectively. As discussed in the previous paragraph, farmers were growing a select number of crops under lease and control group and therefore for the sake of comparison, value of output and costs of production for all crops under lease and control have been aggregated together in their respective categories. The analysis indicates that on the aggregate, value of output per acre of cropped area was Rs 43 thousand for leased-in crops and Rs 38

Table 4:
Details of crops grown by leased-in and control farmers

Crops grown under leased-in area	% share	Crops grown under leased-in area	% share
Andhra Pradesh		Karnataka	
Dry chilly	58.33	Tomato	45.71
Cotton	41.67	Green chilli	28.57
		Babycorn	25.71
Haryana		Punjab	
Wheat	69.12	Potato	45.54
Paddy	9.03	Paddy	23.08
Mustard	7.96	Wheat	18.89
Barley	5.88	Peas	5.80
Potato	5.47	Barley	4.58
Moong	1.72	Cotton	1.83
Red gram	0.74	Fodder	0.15
Tomato	0.08	Maize	0.13
Andhra Pradesh		Karnataka	
Dry chilly	45.95	Babycorn	43.21
Cotton	10.41	Ragi	8.43
Jowar	17.19	Tomato	14.3
Maize	8.26	Green/Red chilly	8.58
Onion	3.64	Coconut	6.08
Other crops	14.55	Other crops	19.41
Punjab		Haryana	
Paddy	34.03	Wheat	34.08
Wheat	34.72	Paddy	22.09
Potato	5.22	Berseem/fodder	6.19
Green fodder	8.57	Bajra	8.02
Cotton	5.59	Cotton	7.76
Other crops	11.86	Other crops	21.85

thousand per acre for control crops. The value of output per cropped area was Rs 91 thousand in Karnataka, Rs.70 thousand in Andhra Pradesh, Rs.50 thousand in Punjab and only Rs.30 thousand in Haryana.

The reason for high value in Andhra Pradesh and Karnataka as compared to Punjab and Haryana under lease farming and against the general trends of high productivity in the latter green revolution states lie in the nature of crops grown under this category. The two southern states were growing high value crops under leased-in land like dry chillies and cotton in Andhra Pradesh and baby-corn, green chillies and tomato in Karnataka. In comparison, cereal crops like paddy and wheat were grown in Haryana and wheat and potato were grown in Punjab. Except potato, most of the other crops grown in these two states had only low returns as compared to high value crops which occupied major share in the southern states. Punjab and Haryana, farmers were growing paddy and wheat for assured MSP but with average returns. Thus, assured MSP only yielded average returns to Punjab and Haryana farmers whereas market based risky crops entail high returns to the

Andhra and Karnataka farmers. Therefore, these trends indicate the importance of diversification of cropping pattern towards high value crops for which demand is rising at a faster pace with the rising living standards especially among the urban masses.

In the case of control crops, the difference in productivity was much less across these four states probably because of coverage of low value cereals and oilseed crops in all the four states. For these reasons, average value of output per cropped area of control crops was also low, Rs 41 thousand in Andhra Pradesh, Rs 40 thousand in Punjab, Rs 33 thousand in Haryana and Rs 31 thousand in Karnataka. Nevertheless, the net returns to the farmers are determined by not only the productivity and price obtained, i.e., value of their productivity but also their cost of production. It is also well known that high value crops are not only risky but also have higher cost of production on account of higher material cost as well as labour cost. Therefore, it would be interesting to compare the net profitability across these selected states and the two categories of leased and control crops.

Table 5a:
Net returns per acre of cropped area under tenancy – All crops

Particulars	(Rs per acre)				
	Andhra Pradesh	Haryana	Punjab	Karnataka	Aggregate
Average area planted under lease-in/share cropping (acres per hh) \$	2.51 (51.37)	8.98 (30.95)	9.47 (32.83)	2.05 (36.84)	7.22 (32.59)
Cost of seed and transplanting	2537	1552	4450	4646	3127
	(4.73)	(4.28)	(12.57)	(8.16)	(8.82)

Manure & fertilizer	8293	2393	3833	12957	3497
	(15.47)	(6.59)	(10.82)	(22.75)	(9.86)
Irrigation, canal, hired tube well and electricity charges	350	576	362	1303	458
	(0.65)	(1.59)	(1.02)	(2.29)	(1.29)
Plant protection, pesticides etc.	7384	1324	1930	6286	1969
	(13.78)	(3.65)	(5.45)	(11.04)	(5.55)
Expenses for tractor/bullock in ploughing	3881	1746	2400	3543	2203
	(7.24)	(4.81)	(6.78)	(6.22)	(6.21)
Repair, maintenance and depreciation@	986	2030	2030	4309	2010
	(1.84)	(5.59)	(5.73)	(7.57)	(5.67)
Rent paid for leasing in land (per acre per hh)	10108	23455	12067	4105	15292
	(18.86)	(64.63)	(34.08)	(7.21)	(43.12)
Hired labour charges	12829	3032	6323	15146	5302
	(23.93)	(8.35)	(17.86)	(26.59)	(14.95)
Marketing cost including grading, storage, transport, packing	1902	43	25	3257	145
	(3.55)	(0.12)	(0.07)	(5.72)	(0.41)
Market/mandi fee etc.	1431	2	28	583	90
	(2.67)	(0.01)	(0.08)	(1.02)	(0.25)
Miscellaneous	24	89	70	0	75
	(0.04)	(0.25)	(0.20)	(0)	(0.21)
Interest on working capital#	3879	48	1892	821	1410
	(7.24)	(0.13)	(5.34)	(1.44)	(3.98)
Total cost	53603	36291	35411	56956	35460
	(100)	(100)	(100)	(100)	(100)
Total cost without rent	43495	12836	23344	52851	20168
Total revenue	69631	30124	49816	90971	42689
Total revenue - Total cost	16028	-6167	14405	34016	7229
Total revenue - Total cost (without rent)	26136	17288	26472	38122	22521

Note: # Interest on working capital is interest paid on the loans/borrowing divided in proportionate to each crop sown during the year.

\$ Figures in parentheses are respective percentage of gross cropped area under leased-in crops

Table 5b:
Net returns per acre from owned land/control crops – All crops

(Rs per acre)

Particulars	Andhra Pradesh	Haryana	Punjab	Karnataka	Aggregate
Average area planted under control crops (acres per hh)	2.05	11.82	16.3	2.98	8.27
Cost of seed and transplanting	2127	1387	1089	1509	1297
	(8.24)	(9.87)	(6.35)	(6.84)	(7.66)
Manure & fertilizer	6660	2105	2797	4794	2961
	(25.79)	(14.98)	(16.3)	(21.72)	(17.48)
Irrigation, canal, hired tube well and electricity charges	508	503	288	625	412
	(1.97)	(3.58)	(1.68)	(2.83)	(2.43)
Plant protection, pesticides etc.	3129	781	1255	2009	1263
	(12.12)	(5.56)	(7.31)	(9.1)	(7.46)
Expenses for tractor/bullock in ploughing	3668	1506	1965	1361	1833
	(14.21)	(10.72)	(11.45)	(6.17)	(10.82)
Material cost of harvesting	0	13	0	10	6
	(0)	(0.09)	(0)	(0.05)	(0.03)
Repair, maintenance and depreciation@	870	4387	2878	4431	3386
	(3.37)	(31.22)	(16.77)	(20.07)	(20)
Hired labour charges	5637	3205	3985	3885	3784
	(21.83)	(22.81)	(23.23)	(17.6)	(22.34)
Marketing cost including grading, storage, transport, packing	821	9	3	1040	146
	(3.18)	(0.06)	(0.02)	(4.71)	(0.86)
Market/mandi fee etc.	437	5	0.16	691	95
	(1.69)	(0.04)	(0)	(3.13)	(0.56)
Miscellaneous	7	5	19	7	12
	(0.03)	(0.04)	(0.11)	(0.03)	(0.07)
Interest on Working Capital#	1956	146	2877	1712	1740
	(7.58)	(1.04)	(16.77)	(7.76)	(10.27)
Total Cost	25820	14051	17157	22074	16934
	(100)	(100)	(100)	(100)	(100)
Total Revenue	40803	32721	39976	31107	38005
Total Revenue - Total Cost	14982	18670	22819	9033	21071
Total Revenue - Total Cost (Without lease rent)	14982	18670	22819	9033	21071

Note: # Interest on working capital is interest paid on the loans/borrowing divided in proportionate to each crop sown during the year.

Cost of production has been calculated by adding material cost and labour cost. The material cost includes cost of land preparation including cost for bullock or tractor for ploughing etc., seed and transplanting, farm yard manure, bio and chemical fertilizer, plant protection chemicals, irrigation charges that includes, canal, hired tube well and electricity charges, harvesting including threshing charges, repair & maintenance of implements including depreciation cost and cost for marketing the produce. Material cost also includes rent for land leased-in but imputed value of owned land has not been included in the total cost of production. Among the labour cost only the paid out labour cost has been included in the total cost of production and imputed value of family labour has not been accounted in the total cost.

It is mentioned here that some items of cost are available at the aggregate and not at the crop level, e.g., electricity and canal charges; diesel value of own tractor; repair, maintenance and depreciation; interest on working capital; and so on. For calculating per crop cost of the above items, these costs have been divided by the gross cropped area of the household to calculate their per acre cropped area value. The cost of per acre cropped area will not be comparable across lease and control group farmers as rent for leasing-in land is included in the cost which is borne by the leased farmers while control farmers do not have any leased land and thereby their total cost is free of rent charges. Therefore while calculating net revenue both the cases of including and excluding rental charges have been worked out for leased-in land in the case of leased-in crops.

Comparing cost of cultivation per acre of cropped area, as expected average cost was higher for leased-in farmers, Rs 35 thousand compared to control group whose cost averaged at Rs 17 thousand per acre. The cost for control farmers was only half that of leased farmers as they did not borne any rent cost for leasing-in. Comparing the cost of cultivation excluding rent charges show that still the cost was higher for the leased-in compared to control group farmers, but the wedge between the two was much less, Rs 20 thousand and Rs 17 thousand per acre of cropped area, respectively for leased and control group farmers. Among the four states, cost including rent was highest in Karnataka Rs 57 thousand followed by Andhra Pradesh Rs 54 thousand, Haryana Rs 36 thousand and Punjab was slightly less Rs 35 thousand per acre. The order of cost comparison was same even without including the rent charges, although rent was observed much higher in Punjab and Haryana compared to Andhra Pradesh and Karnataka. Among the control farmers also the order of cost per acre of cropped area was same, Rs 26 thousand in Andhra Pradesh, Rs 22 thousand in Karnataka and Rs 17 thousand in Punjab and Rs 14 thousand in Haryana. Thus, value of output as well as cost per acre of cropped area was higher for high value crops in the two southern states compared to traditional cereal and oilseed crops sown in Punjab and Haryana.

Looking at various components of cost of production, in the case of leased-in crops, the major cost components were seed and transplanting; manure fertilizer and plant protection; rent for leased-in land, hired labour charges; expenses for tractor or bullock for ploughing; and repair and maintenance

charges. Slightly less than half of the cost on average was rent paid for leased-in land that varied from 64 per cent in the case of Haryana to only 7 per cent in Karnataka while share of rent in Punjab and Andhra Pradesh was 34 and 19 per cent, respectively. Cost of fertilizer and pesticides constituted around 15 per cent of total cost that varied from around 33 per cent in Karnataka, 29 per cent in Andhra Pradesh, around 16 per cent in Punjab and only 10 per cent in Haryana. Seed and transplantation cost was on average 9 per cent of the total cost that varied from 13 per cent in Punjab to 4 per cent in Haryana and Andhra Pradesh and 8 per cent in Karnataka. The labour charges were highest, 27 per cent in Karnataka, 24 per cent in Andhra Pradesh, 18 per cent in Punjab and 8 per cent in Haryana while at the aggregate labour cost averaged at around 15 per cent of the total cost.

Control farmers did not lease any land and therefore their cost for rent was nil. This was also one reason that their cost was less, although their cost was less even when we don't consider land lease cost but the difference was much less in the latter case. This points out very high cost of hiring land and among the selected states the rent was much higher in Punjab and Haryana compared to the other two selected states. Among various components of total cost of production for the control crops, the highest was fertilizer and pesticides (25 per cent), followed by labour charges (22 per cent), repair and maintenance (20 per cent), interest on working capital (10 per cent) and seed and transplanting (8 per cent). Cost of fertilizer and pesticides was higher in Karnataka and Andhra Pradesh like the case of leased in

crops. However, it made an opposite trend in the case of labour cost whereby we found Punjab and Haryana having higher cost compared to Karnataka and Andhra Pradesh as against the trends found in the case of leased crops. In the case of other components of cost, there were mixed trends among the selected four states.

Thus, given the fact that both value of output as well as cost of production were higher for leased-in land compared to control crops and both were higher for Andhra Pradesh and Karnataka compared to Punjab and Haryana, it would be interesting to see the net returns to farmers as that makes the farmers' income which matters the most for farmers. On average, value of net returns, i.e., total revenue – total cost excluding cost of rent for leased land was not as diverse as was total revenue and total cost as discussed above. Net returns although were higher for leased-in compared to control crops but their values varied from Rs 22.5 thousand per acre for leased crops to Rs.21 thousand per acre for control crops. Its value for leased crops was highest, Rs.38 thousand in Karnataka followed by Punjab and Andhra Pradesh both at Rs.26 thousand and Haryana Rs.17 thousand. In control crops, Punjab and Haryana led the other two states with value of Rs 23 thousand per cropped acre in Punjab, Rs.19 thousand in Haryana, Rs.15 thousand in Andhra Pradesh and least was Karnataka with per acre value of Rs.9 thousand only. Thus, whereas in leased crops, Andhra Pradesh and Karnataka realized higher returns on account of growing high value crops, but Punjab and Haryana gained more returns in the control group as in this category, cropping pattern was more similar across the four states and Punjab and

Haryana had better economies of scale in growing these crops.

The above analysis highlights the fact that diversifying cropping pattern towards high value crops like fruits, vegetables and animal products and paying more attention towards changing consumer pattern can help achieving the target of doubling farmers' income in a set time period. Liberal leasing laws can further help farmers achieving economies of scale as well as diversifying their cropping pattern towards high value crops. Marginal and small farmers leased-in more land in Karnataka and Andhra Pradesh whereas medium and large farmers leased-in more land in Punjab and Haryana. Thus, there was reverse tenancy in Punjab and Haryana where medium and large farmers tried to increase their size of holding by leasing-in more area to optimize their economies of scale. In Andhra Pradesh and Karnataka, on the other hand, there was direct tenancy whereby small and marginal farmers tried to make their holdings economical by leasing-in more land. The possible explanation of these two different trends could be in Punjab and Haryana agriculture is more mechanized thereby medium size farmers having most of agriculture implements try to optimize their use by leasing-in more holdings. On the other hand, in Karnataka and Andhra Pradesh, where agriculture is still not as mechanized, small and marginal farmers having more access to family labour try to lease-in land to fully utilize the labour component whereas medium and large farmers have less incentive to lease because of rising labour cost. In the previous section it was seen that labour cost was much higher in southern states compared to north.

COMPARATIVE PRODUCTIVITY AND PROFITABILITY OF INDIVIDUAL CROPS:

This section presents comparative returns for the sample crops for leased-in and control groups. We have the case of chillies in Andhra Pradesh, baby corn in Karnataka and paddy, wheat and potato in both Punjab and Haryana in which we have comparable observations for leased-in land and control farmers. Chillies were grown on leased land by around 34 farmers and 34 control farmers. **Table 6** presents details about area cultivated, inputs used, total revenue earned, net returns and the price at which final output was sold by the farmers. The total area devoted to chillies by the selected farmers was 48 per cent of their gross cropped area by the leased farmers and 38 per cent by the control group farmers. On average, area devoted to chillies was 2.5 acres per household by leased farmers and 1.6 acres by the control group farmers. The selected leased and control farmers were selling only dry chillies. Total revenue earned per acre was Rs 1.0 lakh by the control farmers and Rs. 98 thousand by leased farmers. Net profitability was Rs 36 thousand for control group and Rs. 20 thousand for leased farmers. The profitability was lower in the case of leased-in farmers even when we adjust for rent paid for leasing-in land. The highest net price was obtained by control group Rs.72 per kg compared to Rs. 69.5 per kg by the leased farmers.

In the case of baby corn crop in Karnataka, a total number of 47 control farmers and only 3 lease-in farmers cultivated baby corn. Average area per household was 1.5 acres by leased farmers and 1.8 acres by control group which constituted around 30 per cent of the gross cropped area by each of the respective

categories. The overall revenue was slightly higher for leased farmers as compared to control farmers. The gross revenue obtained by leased farmers was Rs 36 thousand compared to Rs 33 thousand by the control group farmers. However, cost per acre was far higher for leased-in farmers as compared to control farmers, both with or without lease rent. Comparing profitability by excluding cost for leasing-in, the control group farmers obtained Rs 12.7 thousand per acre whereas lease farmers earned only Rs 8.4 thousand per acre. Thus, both in chillies as well as in babycorn, the control farmers had edge over leased farmers in terms of better profitability although gross revenue was found higher for leased farmers for babycorn while in chillies, total revenue was also higher for control group farmers.

There are three crops in Punjab and Haryana, for which we had sufficient numbers of observations to compare productivity and profitability between lease and control farmers (**Table 6**). Per household wheat area in Haryana under lease was 12 acres and control farmers' area under wheat was 8 acres. In comparison area under paddy in Haryana for leased farmers was 9 acres and control farmers 19 acres. In the case of potato average per household area was 5 and 8 acres, respectively for leased and control farmers.

In Punjab area under wheat was 8 acres in leased farming and 10 acres for the control group. In the case of potato average per household area was 14 and 12 acres for lease and control groups, respectively. Per household area under paddy in lease and control group in Punjab was 16 and 18 acres, respectively.

Thus area under lease and control farming in Haryana and Punjab was much higher as compared with Andhra Pradesh and Karnataka. Gross revenue was found higher for leased land as compared to control farmers in all the three crops in Haryana and wheat and potato in Punjab. The difference in revenue in wheat crop in Haryana and paddy crop in Punjab was not quite high among leased and control farmers whereas in other crops leased farmers received significantly higher revenue compared to control group farmers. It is interesting to see that the cost of production was much higher for all crops in all the states for the leased land farmers compared to control group without any exception. The higher cost of tenants was due to the cost of rent of land which was zero in the case of control group farmers.

For the sake of comparison of leased and control farmers, in the table we have presented net returns excluding lease rent (as the two categories are comparable without including cost for leasing-in). Net returns were still higher for the control group compared to leased farmers for wheat and paddy, both in Haryana as well as Punjab. Only in the case of potato in both the states, the net returns were found significantly higher for the leased farmers as compared to the control farmers. In the case of net price obtained by the farmers as presented in the last row of the table, there was no particular trend among leased and control farmers indicating similar marketing channels involved in marketing the produce by the tenant and control farmers. Findings of this paper support the literature indicating lack of long term investment on the leased land because of lack of security of tenure for the tenants. On the opposite, the

Table 6:
Net return from various individual crops under leased-in and control conditions

Particulars	Chilli - AP		Babycorn-Karn-taka		Wheat - Haryana		Paddy - Haryana		Potato - Haryana		Wheat - Punjab		Paddy - Punjab		Potato - Punjab	
	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers
Number of households	34	34	3	47	61	228	12	168	13	21	35	116	22	294	51	27
Average area planted (acres per hh)	2.5	1.6	1.5	1.8	12.0	8.0	9.0	19.0	5.0	8.0	8.0	10.0	16.0	18.0	14.0	12.0
Percent share to GCA	47.59	38.2	31.03	29.71	35.27	27.02	40.77	43.97	11.35	18.13	33	37	40	43	20	8
Cost of seed and transplanting	4276 (5.5)	3866 (5.9)	2511 (8.0)	2554 (12.4)	1186 (4.6)	1327 (12.6)	923 (3.4)	1116 (9.9)	10073 (23.4)	9205 (31.7)	1628 (5.4)	874 (6.2)	988 (6.1)	791 (5.4)	8104 (19.1)	7024 (19.1)
Manure & fertilizer	12828 (16.4)	14473 (22.1)	8422 (26.8)	5657 (27.5)	2419 (9.3)	1875 (17.9)	2355 (8.6)	2150 (19.1)	4065 (9.5)	4992 (17.2)	2393 (7.9)	2465 (17.5)	2279 (14.0)	2670 (18.1)	5630 (13.3)	6261 (17.0)
Irrigation, canal, hired tube well and electricity charges	474 (0.6)	587 (0.9)	444 (1.4)	616 (3.0)	459 (1.8)	640 (6.1)	505 (1.8)	423 (3.8)	615 (1.4)	394 (1.4)	550 (1.8)	482 (3.4)	229 (1.4)	233 (1.6)	296 (0.7)	224 (0.6)
Plant protection, pesticides etc.	13549 (17.4)	14021 (21.4)	-	175 (0.8)	1440 (5.6)	728 (6.9)	1589 (5.8)	788 (7.0)	2451 (5.7)	2127 (7.3)	1462 (4.8)	1116 (7.9)	1810 (11.1)	1155 (7.8)	2331 (5.5)	3126 (8.5)
Expenses for tractor/ bullock in ploughing	5105 (6.5)	4643 (7.1)	3000 (9.6)	2865 (13.9)	1669 (6.4)	1351 (12.9)	2281 (8.3)	1564 (13.9)	2731 (6.4)	1834 (6.3)	1992 (6.6)	1866 (13.2)	2385 (14.7)	1986 (13.4)	2659 (6.3)	2312 (6.3)
Repair, maintenance and depreciation@	1032 (1.3)	1213 (1.9)	6034 (19.2)	3262 (15.8)	1396 (5.4)	1622 (15.4)	1393 (5.1)	1617 (14.4)	1903 (4.4)	2057 (7.1)	2229 (7.3)	1965 (13.9)	1887 (11.6)	1916 (13.0)	1589 (3.8)	1806 (4.9)
Rent paid for leasing in land (per acre)	9150 (11.7)	0 (0.0)	3793 (12.1)	0 (0.0)	14184 (54.7)	0 (0.0)	12037 (43.9)	0 (0.0)	13970 (32.5)	0 (0.0)	13550 (44.6)	0 (0.0)	0 (0.0)	0 (0.0)	12881 (30.4)	8774 (23.9)

Particulars	Chilli - AP		Babycorn-Karn-taka		Wheat - Haryana		Paddy - Haryana		Potato - Haryana		Wheat - Punjab		Paddy - Punjab		Potato - Punjab	
	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers	Lease- in farmers	Control farmers
Hired labour charges	21944 (28.1)	19099 (29.2)	5458 (17.4)	4002 (19.4)	2679 (10.3)	2622 (25.0)	5209 (19.0)	3458 (30.7)	7040 (16.4)	8154 (28.1)	3628 (11.9)	3203 (22.7)	4516 (27.8)	3986 (27.0)	7695 (18.2)	6957 (18.9)
Marketing cost	3865 (5.0)	2721 (4.2)	-	(0.0)	56 (0.2)	18 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	63 (0.2)	2 (0.0)	4 (0.0)	3 (0.0)	2 (0.0)	0 (0.0)	3 (0.0)
Market/mandi fee etc.	3418 (4.4)	2270 (3.5)	-	-	0 (0.0)	6 (0.1)	0 (0.0)	0 (0.0)	30 (0.1)	72 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.0)
Miscellaneous	42 (0.1)	12 (0.0)			94 (0.4)	73 (0.7)			111 (0.3)	75 (0.3)	341 (1.1)	101 (0.7)	18 (0.1)	0 (0.0)	0 (0.0)	279 (0.8)
Interest on working capital @10% per annum	2370 (3.0)	2581 (3.9)	1724 (5.5)	1451 (7.0)	329 (1.3)	239 (2.3)	1107 (4.0)	130 (1.2)	0 (0.0)	22 (0.1)	2631 (8.7)	2043 (14.5)	2123 (13.1)	2039 (13.8)	1188 (2.8)	0 (0.0)
Total cost	78054 (100.0)	65486 (100.0)	31387 (100.0)	20591 (100.0)	25912 (100.0)	10501 (100.0)	27398 (100.0)	11247 (100.0)	42989 (100.0)	28993 (100.0)	30406 (100.0)	14117 (100.0)	16238 (100.0)	14778 (100.0)	42373 (100.0)	36769 (100.0)
Total revenue	98026	101463	36000	33284	29851	29616	39352	35320	55396	47160	32209	29456	41599	42082	67519	58693
Total Revenue - Total cost	19972	35978	4613	12693	3940	19115	11954	24073	12406	18167	1803	15339	25361	27304	25146	21924
Total Revenue - Total cost (excluding lease rent)	29122	35978	8406	12693	18123	19115	23990	24073	26376	18167	15353	15339	25361	27304	38026	30698
Price (Rs per quintal)	6952	7228	600	608	1502	1504	1397	1397	624	615	1490	1512	1471	1458	609	618

paper shows that priority of management on part of farmers does not fall short as they try to extract more revenue by growing multiple crops as well as devoting available labour force and other resources to cover the extra cost in terms of rent for the leased land. These findings are reinforced by the fact that both, revenue earned as well as paid out cost for the leased land were by and large higher than owner holdings while latter earned slightly higher net profit as in their case cost of land was nil.

PROBLEMS FACED TOWARDS LAND LEASING:

During our interactions with the farmers we tried to ascertain farmers' opinion on land leasing and land sharing practices in the rural areas. In our field questionnaire, we enquired from farmers who had leased-in or leased-out land during the reference year or in the past, about the problems faced by them and their opinion on how to improve the land tenure system in the country. We also enquired farmers' responses on development of land leasing / land sharing companies and whether such system would benefit the farmers. In this section we present briefly the findings of our field enquiries on various aspects of land leasing and land sharing practices.

To our question, what kind of problems were being faced by the farmers due to absence of a formal lease market, a significant majority of farmers replied that they were facing problem in rent fixation (**Table 7**). Almost all farmers in Karnataka, more than half in Punjab and Haryana and more than one third of respondents in Andhra Pradesh indicated that they were facing this problem. The kinds of problems they faced in rent fixation are summarized as: No possibility for change / modification of rent fixed by the land owners; As rent is fixed pre hand, loss will have to be borne by tenants alone in the case of low yields or crop loss due to some reasons; Rent fixed as per norms of irrigated land but afterwards, land owners do not provide irrigation facility or the facility is not sufficient; Lease amount is increased annually; Lease amount is to be paid in advance as per agreement; Lease amount is fixed irrespective of crop success or failure; Lease amount for land with irrigation sources is very high and needs to be brought down; Once taken land on lease, it is not easy to withdraw; The tenants may be allowed to pay rent in instalments or at least seasonal basis; Lease amount is fixed arbitrarily; Lease amount is abnormally increased even for ordinary land.

Table 7:
Problems faced due to informal leasing/sharing

(percent of hh)

Problems faced	Andhra Pradesh	Haryana	Punjab	Karnataka	Aggregate
Rent fixation problem	36.85	54.87	61.00	95.09	62.07
Period of leasing too short	35.26	29.42	31.00	84.87	45.28
Uncertainty for next year	26.29	33.80	39.60	82.32	45.63
Lack of necessary investment	13.75	35.19	44.60	79.76	43.45
Overexploitation of leased land	6.18	51.09	59.80	38.11	38.78
Other problems	10.16	68.59	0.00	33.99	28.25

The second most important problem highlighted by the selected households was period of leasing being too short. It is to be clarified that in most of the cases, the lease period was either one season or one year and only in miniscule cases the long term lease of two years or more was found among the selected farmers. Above 30 per cent farmers pointed out this problem. The specific issues related to short lease period were the following: The required time and energy is not devoted to such land as utilization period is limited; There is insecurity and risk of crop without adequate water facility; It is not viable to apply FYM and make high investment due to short lease period; Tenants are not in a position to recover from crop loss in the next season due to shorter lease period, if on the other hand, lease period is longer there is possibility to recover and make out from crop loss in the next season; Tenants sometimes are unable to recover even lease amount; Land owners even if willing do not give land on lease for a longer period due to risk of loss of land; Short duration lease period also restricts tenant from growing more number of crops and more importantly perennial crops; Dues may be less in the case of long period lease; Tenants are frequently changed or rotated therefore there is a need for written agreement for tenants with two years or more duration.

Uncertainty for the next year was also pointed out by majority of the households. The main issues highlight were: Not sure whether lease period would be extended for the next year; Every year land is available for lease but by a different farmer or different piece by the same farmer (generally single farmer will not give land on lease to same tenant every year).

tenants do not make investment in soil fertility because of uncertainty of being not sure for extension of lease next year; Lease amount next year will be increased if there is good yields this year; Regular payment of lease amount is a concern for land owner while choosing new tenant every time; Not sure of decision of land owner for leasing-out land next year forces tenant to look out for other farmer for lease; Uncertainty prevails with increase in lease amount and lack of written agreement; Tenant farmer who incurred loss previous year opt out of leasing-next year; Due to short term lease there remains lack of trust among both the parties; Increase in debt burden as land is not given on lease regularly;

Due to short term lease there remains the problem of lack of necessary investment on the lease land. As per farmers' opinion, they are not ready to invest due to short duration of lease; There are chances of poor crop yield even after investment due to lack of long term reform on the land and tenant will lose heavily in such circumstances. For such reasons, tenant opt minimal investment as a coping option; Investment for crop is not mobilised in advance; Long duration and commercial crops are not grown due to short term lease period; Need to borrow loans at higher interest rates to make investment, which is riskier; High lease amount likely for productive land with better water availability.

Lastly, the short term lease leads to overexploitation of the land resources. This is evident from reducing soil fertility and no action is taken by the tenant on preventing depletion of soil fertility; The higher practice of leasing short term also leads to excessive use of ground water as the tenant has to

recover not only returns for the labour and investment from the land but also extra cost as rent which is paid to the land lord. The other problems faced by the tenants were: Input subsidy and crop insurance go to land owner and not to tenant; Crop loss compensation is transferred to land owner's account; Tenant should not be pressurized for payment of lease amount in the case of crop loss or low yield; Land owners think that tenant will get legal right if land is given on lease for long period; Owners prefer tenants who are willing to pay lease amount in advance thereby it adds extra cost in terms of high interest rate as banks do not lend for such money; Land owners do not intend to bear maintenance charges that adds extra cost to the tenants; Trees are cut and sold / used by tenants without informing to land owner.

FARMERS' OPINION ABOUT DEVELOPMENT OF FORMAL LAND LEASE MARKET:

In our attempt to understand farmers' views on development of formal lease market with set of rules defined for both land lesser and lessee and provision for long terms lease at least for ten years with willingness of both the parties. We posed the question to the selected households, "what would be the advantages and disadvantages if leasing or sharing becomes formal practice with proper rules and regulations and it allows long term contract, e.g., leasing for 10 years period"? The farmers' opinion about advantage and disadvantages are summarised here.

Major advantages highlighted by farmers were the following: Land will be taken care like own land; Can plan for the crop and long duration crops can be sown on such land also;

Long term investment like installing a bore or tube well, using land leisure levelling, application of FYM or even organic farming can also be undertaken; New methods of agriculture can be implemented and any crop can be sown on lease land; Likely increase in crop yield as a result of better management and better inputs used; For landlord lease amount will be assured and for tenant land will be available for long term cultivation; Local labourers will get more employment; Better water facility provision can be made; There will be more crop diversification; Will reduce forced migration; Land will not be kept fallow in fear of losing land by the owners; More investment in machinery; Increase in market and transport facilities; Might lead to higher wage rates; Small and marginal farmers can earn more by leasing-out land and entering into wage market; Cheaper institutional credit will become accessible to tenants;

Major disadvantages highlighted were: It may lead to excessive use of fertilizers; Increase in machinery use leading to reduction in work for wage earners; In the event of long term lease land may be increasingly used for other than agriculture purposes; Small farmers may struggle to get wage labour if dominance of large holdings increases due to rising activities of lease; Small farmers survival and existence may suffer; Land will not be available for small tenants.

Thus, by and large farmers favoured a formal system of lease market. Most of the farmers pointed out that they face problems in the informal leasing as lease rate was arbitrary and lease period was too short. The short period of lease does not allow farmers to

make reforms on such land and requisite investment is not made by them. As tenants keep shifting, the necessary expenditure on irrigation, land levelling, soil improvement and other such activities are not given any attention on such land. The farmers in many cases overuse doses of fertilizer and pesticides in order to fetch more returns from such land which destroys the soil in the long run. The farmers also indicated their desire to lease-out their land to lease companies but they found having lack of trust on such companies. Therefore, any such future provision should be made keeping farmers interest in mind.

Some changes are being introduced in different states regarding laws on land leasing and land sharing. While doing so it should be kept in mind that the interest of farmers and not the corporate sector should be given due priority. The right reforms in this direction will go a long way improving the agriculture system. However, marginal and small farmers should be encouraged and it should be made sure that their situation improves within agriculture not by converting them from cultivators to land less labourers. They should not end up giving up agriculture, lease out their land to companies and become land less labourers. Land reforms should target to make the land viable for these holders and not making them landless labourers working for the lease companies.

CONCLUDING REMARKS:

Summarising the findings of the paper, among the selected households, tenancy existed mostly in terms of cash payment on seasonal or yearly basis and tenancy in terms of share cropping was almost non-existent or existed to a limited extent. The net leased-in land was

much higher in Punjab and Haryana compared to other two selected states. The tenure of lease was mostly short term while in some miniscule cases long term lease was observed. The rent for long term lease was significantly lower compared to short term lease. Thus, if provisions are made for long term lease it may provide opportunity to small holders to raise their holding size to the economical level. There was reverse tenancy in Punjab and Haryana where medium and large farmers tried to increase their size of holding by leasing-in more area to optimize their economies of scale. In Andhra Pradesh and Karnataka, on the other hand, there was direct tenancy whereby small and marginal farmers tried to make their holdings economical by leasing-in more land. Findings of this paper support the literature indicating lack of long term investment on the leased land because of lack of security of tenure for the tenants. On the opposite, the paper shows that priority of management on part of farmers does not fall short as they tried to extract more revenue by growing multiple crops as well as devoting available labour force and other resources to cover the extra cost in terms of rent for the leased land. These findings are reinforced by the fact that both, revenue earned as well as paid out cost for the leased land were by and large higher than owner holdings while latter earned slightly higher net profit as in their case cost of land was nil.

To conclude, we can articulate that after independence land reforms by many states consisted of abolition of intermediaries, redistribution of ceiling surplus land to poor and consolidation of landholdings. However, in the present era of declining landholding

size as well as the need for occupational mobility and moving surplus manpower from agriculture, land leasing is viewed as an 'economic necessity' and not merely as a feature of 'semi-feudal agrarian structure'. In the recent times, the Union Government has been determined on reversing the order by bringing new legislations. Towards this end, the NITI Aayog had prepared **A Model Agricultural Land Leasing Act 2016** drafted by an expert committee chaired by Dr. T. Haque. According to which, land can be legally entered into a lease contract with the tenant for use of his/her land for agriculture and allied sectors like, Fruits and vegetables, floriculture, plantation crops, animal husbandry, prawn culture, poultry farming, agro processing, breeding and agro forestry for a specified period and for an amount based on the terms and conditions mutually agreed upon by the owner and the company.

Agriculture land leasing is beneficial on several fronts - improving productivity, access to credit and crop insurance to lease holders and better utilization of land and labour. Secondly, leasing land would help a firm or contractor keen on foraying into agriculture or expand their existing business without the high capital cost of purchasing land. For the landowner also it will provide a steady income from land without actually farming. They can engage in non-agricultural activities to get some more income. In addition, small farmers by leasing-out land in favour of the medium and large farmers will boost agricultural production and increase employment. With land acquisition becoming difficult due to stiff political opposition and farmer resistance, land leasing could be one of the best alternatives. As small-scale farming is becoming unviable,

leasing farmland by farmers can provide them an assured income. The negative effects of fragmented smallholdings on production can be avoided with consolidation of holdings as widely practiced in Punjab and Haryana in the present case.

To promote export and processing where the lessor and lessee can profit as well as the existing workers can be absorbed into the processing unit dispelling fears of displacement. Legalization of leasing would increase occupational mobility of people; it would improve the availability of land in the lease market and also poor people's accessibility to land through leasing. It would discourage land being kept fallow and result in better utilization of land and labour and increase farm output. It would promote both farm and non-farm development by improving the land owners' ability and incentives to invest. While the slew of reforms announced would, no doubt, empower the farmers economically, tenancy reform is arguably that 'last-mile' intervention that would complement these bold initiatives and enhance the equity and inclusivity of the resultant growth process.

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Annexure Table 1A:
Restrictive nature of tenancy laws in various states

States	Nature of restrictions in tenancy laws
Kerala and Jammu and Kashmir	Leasing out of agricultural land is completely prohibited without any exception.
Telangana, Bihar, Jharkhand, Karnataka, Madhya Pradesh, Chhattisgarh, Uttar Pradesh, Uttarakhand and Orissa	Only certain categories of land owners such as disabled, minors, widows, defence personnel etc. are allowed to lease-out their land.
Punjab, Haryana, Gujarat, Maharashtra and Assam	Tenants can acquire ownership rights on tenanted land after a specific period of creating tenancy but leasing-out of agricultural land is not banned.
Andhra Pradesh, Rajasthan, Tamil Nadu and West Bengal	No restrictions in land leasing but in West Bengal only share cropping leases are legally permitted.
In schedule tribe areas of Andhra Pradesh, Bihar, Orissa, Madhya Pradesh and Maharashtra	Transfer of land from tribal to non-tribal community is prohibited without permission of a competent authority.

Source: Report of the Committee on "State Agrarian Relations and the Unfinished Task in Land Reforms", Department of Land Resources, Ministry of Rural Development, GOI.