

Relative Efficiency of Owner and Tenant Cultivation: A Case Study

Manabendu Chattopadhyay

This paper examines the relationship between size of holding, the intensities with which different types of input are applied, and output obtained under different types of tenancy.

The discussion is presented in three sections. Section I presents some quantitative results pertaining to the interrelations between input and output under different types of tenancy. Section II assesses the results obtained in Section I in relation to the different farm size-groups. In Section III, the view of some scholars in this field are re-examined in the light of the results obtained in our study.

I

THE exercise is carried out with data pertaining to 889 households from the 12 villages of Sriaketan in the district of Birbhum, West Bengal. Out of these 889 households, 808 households are engaged in agricultural occupations. These agricultural households have been classified into three major groups according to their main source of livelihood: Owners, Tenants, and Agricultural labourers. Table 1 presents the distribution of households according to these three groups. It is seen that the number of agricultural labour households with no cultivable land is higher than that of the other two categories. However, the total number of cultivating households (both owners and tenants) is significantly higher than that of the landless peasant households. The agrarian structure in this region has, as usual, a three-tier composition — owner cultivator, tenant cultivator and landless labourer.

Within this agrarian structure, let us examine the relative efficiency of the two modes of cultivation — owner cultivation and tenant cultivation — in terms of: input-output relationships (Table 2). The output per bigha is significantly higher in the owner cultivating farms. The inputs too are higher in the owner cultivating farms. However, net income of owner cultivating farms seems to be significantly higher than that of the tenant cultivating farms excluding, of course, the cost of family labour input employed in both these types of holdings. If we assume that a tenant cultivator gets 50 per cent of the produce, then his net income after meeting all the expenses will be significantly lower than that of the owner cultivator.

It seems to us that owner cultivation is always more profitable than tenant cultivation. There are two reasons for this phenomenon. Firstly, the land let out is mostly of a poor quality whose

productivity will be low. Secondly a tenant by his very status is in a disadvantageous position compared to the owner cultivator in so far as his access to monetised inputs is concerned. As such, even after all his efforts, output per bigha on tenant cultivated holdings may not be larger than the output on the farms of owner cultivators.

Our analysis suggests that owner cultivators cultivate their lands more intensely — more of labour and non-labour material inputs, better irrigation facilities, multiplicity of remunerative crops etc. Viewed from this angle, owner cultivation, at least in this region, seems to be more efficient than tenant cultivation. Extensive development of irrigation (including government canals) in recent decades has encouraged the cultivators to cultivate their lands themselves. Thus, the virtual elimination of a particular mode (tenant cultivation) and its replacement by another mode (owner cultivation with hired labourers) that has been observed in this region [Rudra and Newaj 1975] is quite understandable.

II

The same phenomenon may be examined in terms of size of holdings in order to see whether the small owner-cultivators are able to extract more output as compared to big-owner cultivators, or whether small tenants are able to extract less output as compared to big tenants. Table 3 presents data about holdings classified according to types of tenancy and size-groups, intensities of labour and material inputs and productivity. Output per bigha for all crops increases with size in all size-groups considered — other than larger farm size-groups — in the owner and tenant cultivated farms whereas the reverse picture is noticed in the case of combined category. Material input per bigha, however, does not show this tendency. It increases with size in the owner cultivated as well as mixed farms,

but decreases with size in the tenant cultivated farms. Moving away from material input to hired labour input, it is seen from Table 3 that hired labour input per bigha shows no distinct pattern with size in each and every type of tenancy considered here.

Three points emerge from our analysis which can be summarised as follows:

(i) Inverse relation between size and productivity is found not to be operating for all types of tenancy in this region. Some scholars, however, have persuaded themselves of the validity of the inverse relation between farm size and productivity in Indian agriculture, and opposition to this view has also been voiced by some other scholars [see for details, Chattopadhyay and Rudra 1976]. Our exercise shows that the inverse relation between size and productivity does not necessarily mean that the relationship holds in all ranges of the size variable for each and every

TABLE 1: DISTRIBUTION OF AGRICULTURAL HOUSEHOLDS ACCORDING TO MAIN SOURCE OF LIVELIHOOD

Sources of Livelihood	No of Households	Total Area Operated (Bighas)
Owner cultivation	283 (35.02)	3550.97
Tenant cultivation	183 (22.65)	2690.90
Agricultural labour	342 (42.33)	—
Total	808 (100.00)	6247.87

Note: Figures in brackets indicate percentage distribution.

TABLE 2: OUTPUT AND INPUT PER BIGHA OF CULTIVATED LAND (RS)

Type of Cultivation	Output	Input Material	Hired Labour Input
Owners	288.15	76.41	51.77
Tenants	178.64	43.88	28.32
All	240.97	63.69	45.81

Note: Material input includes seeds, manure, fertilisers and irrigation.

TABLE 3: OUTPUT AND INPUT PER BIGHA OF CULTIVATED LAND ACCORDING TO OWNERSHIP OF HOLDINGS: BIRDHUM 1976-77

Type of Tenancy by Size of Holdings (in Bigha)	Output Per Bigha (Rs)	Material Input Per Bigha (Rs)	Hired Labour Input Per Bigha (Rs)
(1)	(2)	(3)	(4)
Owners			
0.01 — 5.00	278.2	73.0	30.8
5.01 — 10.00	311.2	73.1	53.2
10.01 — 15.00	332.5	74.2	41.2
15.01 — 20.00	280.9	70.8	50.0
20.01 — 30.00	290.4	77.9	70.2
30.01 — 40.00	282.2	68.3	65.8
40.01 and above	207.0	80.8	30.0
All	288.2	76.4	51.8
Tenants			
0.01 — 5.00	177.1	48.9	37.5
5.01 — 10.00	190.1	57.0	26.4
10.01 — 15.00	173.4	53.7	24.4
15.01 — 20.00	135.8	30.2	18.0
20.01 — 30.00	204.0	31.7	33.8
30.01 — 40.00	202.2	36.1	55.0
40.01 and above	—	—	—
All	176.6	43.9	28.2
Combined			
0.01 — 5.00	262.3	69.5	31.0
5.01 — 10.00	257.7	68.3	48.7
10.01 — 15.00	244.4	64.8	35.8
15.01 — 20.00	211.5	57.4	38.6
20.01 — 30.00	253.0	62.0	59.6
30.01 — 40.00	246.9	56.9	57.3
40.01 and above	207.0	80.8	30.0
All	241.0	63.9	45.8

type of tenancy. In fact, our data show that when it comes to individual tenancy group there are strong indications that output per bigha by and large increases with size. This relationship, however, does not hold when all types of tenancy are combined into one group and accordingly data are pooled in it against each farm size-group. It is thus clear that such pooling or aggregation can falsify the nature of dependence of farm size.

(ii) Incidence of material input which is negatively associated with farm size in tenant operated farms only cannot similarly be considered as a general phenomenon. That is, one cannot talk of this tendency operating over all the size range as well as tenancy groups. Effect of aggregation or pooling of data pertaining to different tenancy groups does, in fact, hamper the nature of relationship between size and material input per unit of land.

(iii) Similar conclusions, however, cannot be drawn regarding the relationship between farm size and hired labour input per unit of land. In fact, no clear-cut pattern is revealed from our data relating to farm size and hired labour input for all the size-classes and

for all types of tenancy.

Coming now to the results of our analysis relating to the intensities of labour and material inputs as well as productivity of land with corresponding farm size-groups under different types of tenancy, the following points may be noted:

There is a remarkable difference in the utilisation of labour as well as material inputs per bigha among the farmers of corresponding size-groups under owner and tenant cultivated farms. It is seen that intensity of both labour and material inputs is considerably lower in all the size-classes of tenant operated farms compared to owner operated farms. Output per bigha is also lower in all the size-classes of tenant cultivated farms compared to owner operated farms.

Taking the comparisons between smaller and larger farm size-groups for each type of tenancy, it is seen that output per bigha is higher in the smaller size-groups than the larger farm size-groups of the owner cultivated farms, whereas the reverse picture is noticed in the case of tenant cultivated farms. Similar pattern is revealed in the case of material input per bigha

between the smaller and larger farm size-groups of these two types of tenancy. Hired labour input per bigha, however, shows that it is lower in the smaller size-groups compared to larger size-groups of both owner and tenant cultivated farms.

Taking these two results together the following conclusions have been drawn. Owner cultivators, whether small or big, seem to cultivate their lands more intensively leading to higher production. A big tenant cultivator is very often able to devote a greater amount of labour as well as a fair amount of material input per unit of land and thus the productivity of his land seems to be not so low compared to that of a big owner cultivator.

However, a small or a middle tenant by his very position is at a disadvantage, as has been discussed earlier. Hence, output per bigha on his farm may not be larger than on the farms of bigger owner or tenant cultivated farmers.

III

There seems to be very few studies dealing with the problems of resource-use efficiency of different types of tenancy considering the costs and returns between them. We briefly recapitulate these few works.

C H Hanumantha Rao (1971) undertook an analysis of farm level observations taken from farm management data in a rice zone of Andhra Pradesh during 1957-58 and 1958-59. An attempt was made in this study to examine the comparative efficiency with which land is cultivated among owner-operated and share-rented farms. The results of the analysis suggested that "when the relative alternatives are specified, the evidence examined does not indicate significant inefficiencies in the use of land under share-cropping".

Also, an attempt in fitting the Cobb-Douglas type of production function of the data suggested that "there is a decline in the marginal productivity of land with an increase in the size of holding among owner-operated farms. Over a wide range, the marginal productivity of land among the share-rented farms is higher than owner-operated farms of corresponding size and is not lower than large owner-operated farms, which account for the bulk of land lease out". Rao ultimately concluded that share-croppers cultivate their lands more intensively than the large owner-operators.

It may be noted that the results of our analysis give a somewhat different

picture from the results of Rao. According to our data, share-rented farms of all size-classes except the biggest; one indicate significant inefficiencies in the use of land compared to the owner-operated farms of size-class, at least in the understudy.

Bhardwaj [1974] examined certain relationships between levels of tenancy and input and output per unit of land. An attempt was made in this study to compare costs and returns between different levels of tenancy in a region of Maharashtra. According to Bhardwaj "with increasing levels of tenancy output per acre showed a tendency to decline. Also, at lower levels of tenancy inputs were applied relatively more intensively".

The Results of our analysis, however, show that the phenomenon cannot be accepted unambiguously. In the matter of intensity of labour input as well as material input, there seem to be considerable differences between owner and tenant cultivated farms. Consequently, the output per unit of land in the tenant cultivated farms is lower than that in owner cultivated farms.

Vyas [1970] found that the resource-use efficiency of tenant cultivated farms is higher than the owner cultivated

farms. This study was based on a survey data of four Gujarat villages in the 1960s. On the basis of empirical evidences, he came to the conclusion that "the high efficiency of tenants, especially the medium and small ones, in resource use is indicated by the high (average) input-output ratio on their farm".

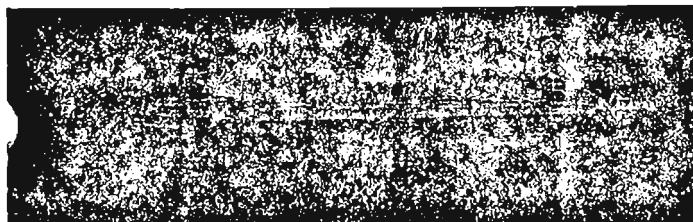
Our data, once again, do not support this hypothesis and clearly indicate that owner cultivators of all the size-classes cultivate the land more intensively than the tenant cultivated farms of the corresponding size-classes except the biggest one. In fact, large tenant cultivators behave more or less the same way as owner cultivators in so far as the intensities of different types of input as well as productivity of land are concerned. The evidence thus does not indicate significant inefficiencies in the use of land under large tenant cultivators. Viewed from this angle, it would be fallacious to treat the whole community of share-croppers as efficient or 'inefficient' in the use of land under cultivation.

Hence, it may be suggested that the relationship of farm size of different tenurial groups and the intensities of different types of input as well as pro-

ductivity of land operate differently in different regions of India at different points of time. The explanations provided by us are based on the evidence of a particular region of India. The coverage of the study should, therefore, be expanded to other regions for understanding the phenomena more comprehensively.

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