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LAND TRANSACTION IN TRIBAL ECONOMIES: A STUDY FROM THE SCHEDULED AREAS OF ORISSA

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LAND TRANSACTION IN TRIBAL ECONOMIES: A STUDY FROM THE SCHEDULED AREAS OF ORISSA

Amalendu Jyotishi and R S Deshpande*

Abstract

Structure as well as operation of land market in LDEs are complex. In this context, our paper is an attempt towards theoretically examining the functioning of land market in a tribal economy and empirically identifying it through a village study. Critically looking into two land transaction models of Basu, and Feder and Feeny, we observe that price alone cannot be a sufficient factor to influence the supply of land. We conclude that land market functions mainly from supply side determinants via the intensity of land required by the owner, intensity of fund needed for immediate purposes and aggregate cash outflow.

Introduction

Structure as well as operations of land market in Less Developed Economies (LDEs) are complex in nature and defy the general expectations about the behaviour of the market. In LDEs, land is treated as an indicator of social wealth and prestige apart from having an important function of collateral in the case of emergent fund requirements. Therefore, often the size and/or quality of land, defying the basic nature of the demand function, determine the price of land. It is not surprising that in the literature scan we find arguments regarding land market response to prices. As Cain (1981) puts it, land sale takes place in order to satisfy 'conspicuous or status consumption', investment needs and institutional requirements. Sarap (1998), based on a village study, analysed in detail the sudden requirement for cash arising due to many factors like marriage, medical purpose, consumption need, and investment. Even in the presence of sudden requirements, people part with their land resource when good price is offered (Basu, 1986). But this situation is acute specifically when the economy is not sufficiently monetised and the economic agents feel the necessity of or forcibly become part of the exchange (monetised)

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economy. People sell their land because they are offered good price; this proposition needs to be properly conceptualised because a good price is often associated with personal valuation of land. In this context Bhaduri's argument sounds logical that a poor peasant does not want his means of livelihood to become a part of an exchange economy (Bhaduri, 1986). We are dealing with a situation of an area where property rights are amorphous. Therefore, the reverse of this argument can also be equally logical in a context-specific land use, mode of production, topography and food habits.

After the emergence of the paradigms under the New Institutional Economics, property right emerged as an important determinant in a market economy framework. Property right structure on land and its effects on land market were also studied by many researchers. The mainstream economists went a step ahead and claimed that individual private property rights on land will lead to an active land market (Johnson, 1972; Feeny, 1988; Feder and Feeny, 1991). They also assume that the introduction of private property rights on land will lead to the elimination of risk and uncertainty in land rights. This in turn will bring social benefits by facilitating the efficient use of land as a factor of production. The security in land rights will in return have positive effects on land price.

Cain (1981) in his study of India and Bangladesh identifies various risk and insurance mechanisms that influence or have effects on agrarian changes. He found various factors including consumption, investment, institutional constraints etc., being attributable to the land transaction. He concludes that patterns of economic mobility and change in the distribution of land can be understood by considering their respective environments of risk and sources of risk insurance. Risk factors may not always be a threat to part with the land one owns; though the resultant effect may be land alienation. It is necessary to bear in mind here that the land transactions are more often interim in nature in the hope of repurchase of land. However, there are regional and cause-dictated patterns in such transactions. We look into two models of land transactions here.

Model of Interim Land Transaction

Thus we have the total as well as interim land transactions as two major factors in the land market where transfer of property right is involved. In his model of interim land transactions, Basu (1986) segregates regular supply and interim supply, so also the case with demand. Regular supply and demand functions are denoted as follows;

$$(i) \quad S^* = S^*(p) \quad S^*(p) \geq 0$$

$$(ii) \quad D^* = D^*(p) \quad D^*(p) \geq 0$$

There exists a price p^* such that the equilibrium price $p > p^*$ then $D^{\wedge}(p) = 0$

In his detailed analysis of the interim supply model he assumes that there is a set N consisting of n individuals. Each one owns one unit of land and is considering interim sales. Suppose an individual $i \in N$ has need for liquid money over the following years, let $a(i) \geq 0$ be the benefit derived from each rupee of cash. Say, money held as cash has a value of $c(i) < 1$ for all $i \in N$ if the individual i , considers the probability of buying back the land is ϕ . Therefore, i will sell land only if,

$$a(i)p + \phi p + (1-\phi)c(i)p - p \geq 0$$

or,
$$d_i = a(i) / (1 - c(i)) \geq 1 - \phi$$

for a given ϕ , the interim supply of land is

$$\# \{ i \in N \mid d(i) \geq 1 - \phi \} = T$$

ϕ is a function of aggregate supply and demand, and volume of interim transactions depends on ϕ , and people take probability of ϕ as

i.e.
$$\phi = (S/D)^{\alpha}$$

$$S/D = S^{\wedge} + T / D^{\wedge} + T' \quad (a)$$

where, T and T' are interim supply and demand respectively.

In equilibrium,
$$S/D = (S/D)^{\alpha}$$

Hence,
$$T = \# \{ i \in N \mid d(i) \geq 1 - (S/D)^{\alpha} \} = T(S/D)$$

The solution he reached is

$$T = T(S/D) = 0 \text{ if } d(0) \leq 1 - (S/D)^{\alpha}$$

$$n \text{ if } d(n) \geq 1 - (S/D)^{\alpha}$$

$$d^{-1}(1 - (S/D)^{\alpha}) \text{ otherwise}$$

Therefore equilibrium interim sales is the value of T which solves above conditions along with condition (a).

A few interesting points emerge out of the theory of interim land transactions. Essentially, the interim transfer of land takes place more often on an ad hoc basis and only the aggregate amount, i.e.,

$(p^* \times a)$, say Ag (price of land multiplied by total area transacted), features in the transaction. Therefore, more often it is not the quantum of land transacted which gets determined by p^* , but the total amount (Ag) which is often pre-fixed, decides the quantum and/or quality of land. This raises a puzzle for the specification of supply or demand functions.

Ownership Uncertainty Model

Feder and Feeny (1991) attempted a model for land price. The proposition follows like

$$y = y(k); y' > 0, y'' < 0$$

where, y = output per unit of land; k = capital to land ratio and y' and y'' are first order and second order functions of y respectively.

$$U = U(C_0); U' > 0, U'' < 0$$

where, U = utility of first period consumption; C_0 = first-period consumption and U' and U'' are first order and second order functions of U respectively.

$$S = s(\phi) pT; s' < 0, 0 < s < 1$$

Where S = total credit rotation; P = price of land; T = land; ϕ = probability of ownership loss and s = proportion of land holding value to land sharing as collateral

The objective function is

$$\text{Max. } U(C_0) + (1-\phi) T [y(k) + p] - (1+r) s(\phi) pT$$

Subject to budget constraint

$$W_0 + s(\phi) pT = kT + pT + C_0$$

Where, W_0 = initial wealth.

From this proposition Feder and Feeny conclude that equilibrium capital-to-land ratio declines as a result of higher uncertainty of ownership of land. The intuitive conclusion that follows from this is: *high uncertainty of ownership increases current consumption at the expense of demand both for land and capital goods*. But, in general land market in LDEs is pervasive and hardly responds to prices. When ownership is well defined, the land transactions need not be efficient, but at many points of time cross the local boundary and become a subjugation of maiden hands of

capital like in our case. In many parts of the LDEs, as in our case, the use of capital for agriculture is minimal and labour (normally family labour) is the sole variable factor of production. In such cases, investment on factor endowment also means consumption.

A Proposition for Land Market in Tribal Economy

The models of Basu as well as of Feder and Feeny follow the basic neo-classical assumption that supply of and demand for land, like any other commodity, respond to the price. Second, in both models (probability of buying back the land (in Basu's model) or probability of losing the ownership (in Feder and Feeny's model) is not based on any empirical support. But it is difficult to treat land like any other commodity in the market, specifically in LDEs, because of the institutional diversities, topography and system of peasantry itself. Both Basu and Feder & Feeny overlooked in their models the agrarian situations in large part of the tropical economies. It is also a fact that LDEs in Latin America, Africa (specifically sub-Saharan Africa) and South and South-east Asia have different features of agricultural operations, specifically in the sloppy and mountainous regions. The economy here largely depends on swidden agriculture, normally performed in the slopes and hilly terrain. Agricultural production in these economies is also highly diversified as compared to plains and temperate economy. Markets and other institutions developed in these economies are also peculiar and different, defying the general rules of neo-classical economics. Reciprocity and redistribution are still dominant institutions and exchange occurs largely through set rates than through a bargained process (for details see Polanyi, 1977; Jyotishi, 2001). Therefore, it would not be wrong to consider our model as a general case for large tracts of LDEs than overlooking it as an exceptional case. As we understand, price alone cannot be a sufficient factor to influence the supply of land. In this perspective, we propose a model which is closer to ground realities in subsistence and less monetised economy. For this purpose we define the supply function of land as

$$S = f(L_t, L_p, \phi_1, \phi_2)$$

Where, S is the of supply land determined by L_t = Type of land,

L_p = Price of land,

ϕ_1 = Intensity of owner's economic dependence on land

ϕ_2 = Intensity of fund (money) required by the owner

$$\phi_1 = f(\gamma_1/\gamma_2)$$

Where, γ_1 = Land related cash flow; γ_2 = total cash flow

and, $\varphi_2 = f(\theta_1/\theta_2)$

where θ_1 = cash required for immediate purpose

and, θ_2 = Aggregate cash outflow of the household.

Given the above, the sale of land takes place under the following conditions

i. $(\theta_1/\theta_2) > (C_a / \theta_2)$ Where C_a is loans or advances available to the owner on collateral including land

ii. $\varphi_1 < \varphi_2$

iii. $|\varphi_1 - \varphi_2|$ will determine the price of the land, thus

$$P = f |\varphi_1 - \varphi_2|.$$

Here also we confront the problem of identification because the supply behaviour also depends on the degree of peasantisation. The degree of peasantisation can be worked out as a proportion of time spend per unit of own land multiplied by the proportion of time spend on own land as against the total labour hours available to the household.

To be specific, (x_1, P_1) gives the level of peasantry,

Where, x_1 = proportion of time spend on own land per unit of land

and, P_1 = proportion of time spend on own land as against total time available with the household.

The demand side factors of the land market in most cases are amorphous and determined by the opportunity available in terms of relative price, location topography, climate and the specific purpose of land use. This is more so in case of the LDEs, where the land sale and purchase are mostly confined to agricultural purposes only.

Agrarian Institutions in the Tribal Economy

Structure, as well as functions, of the agrarian institutions in tribal areas or hills in India are different from the non-tribal areas or plains. Dependency on land and its transaction also varies in these regions as compared with the plains. Social institutions play a vital role in determining the value of land. Economic value of land is always associated with the actual or expected income flow from the land which in turn defines its quality and size². In plains where property rights seem to be well-defined on land, there also land used more as collateral than like any other commodity in the market. Even if we assume that a person is willing to sell land not

because of her/his need for cash but because of the 'good price', it may not happen so because of the presence of various social institutions in the village economy of the plains. Village hierarchy often guides the economy of plains. It is always difficult for individuals to buy land and use it for income generation activities without social approval of traditional village institutions, which can restrict occupation of land in many ways because of the integration of traditional village economy with land economy. Therefore, it is often difficult for the land market to go beyond the boundary (not necessarily geographical boundary rather social boundary) of the village economy unless the legal sanction of external economy is powerful enough to outrage the village institution. Hence, land transaction in agrarian conditions often occurs in distress situations and the potential buyer always waits for such an opportunity to buy land.

Though the consequence of land market in the slopes is also similar to the plains, the processes involved are different. Slope economy (or the so-called tribal economy) is often faced with labour scarcity than land scarcity. Therefore, institutions developed in these economies tries to ensure labour participation in agricultural activities. Reciprocity is one of the dominant forms of organising labour for agricultural activities which can be traced even now among the shifting cultivators (Polanyi, 1977; Jyotishi, 2001). The economy here is largely need-based and the degree of monetisation is low. Therefore, large landholdings in these regions do not command over the terms and conditions of exchange in a market set-up. At the time of stress or cash needs, low lying land or valley land gets a collateral in the local market (specifically among the non-tribal moneylenders), as they can ensure income from this type of land as compared to other slope land. It is also true in many cases that traditionally the tribal (aboriginal) communities have expertise on doing cultivation in slopes. People who do not have access to low or valley land cannot access sufficient collateral from the sloppy land. Therefore, any price above the notional collateral price is considered to be higher when transaction of land is involved. Notions, information, degree of monetisation and exposure to market together contribute to the expected value of land in monetary terms. Difference among the buyer and seller in these terms contributes to a huge difference in price of similar type of land in the slopes and plains. Lower valuation of land due to the presence of these factors keeps the buyer in a formidable situation, whereas the seller is vulnerable to lopsided transaction. We tried to seek an explanation, studying factors influencing the land market in a tribal village in southern Orissa.

An Empirical Investigation in an Orissa Village

The village under study is selected from Bisama-Cuttack region of Raigada district of Orissa. Bisama-Cuttack, which is considered as one of the backward tracts of Orissa, is spread over 1546 square miles inhabited mainly by tribals. This area drew attention due to a huge amount of land

transfer (approximately 5000 acres) from the tribal population in a particular year i.e. 1996. The present study tries to identify the factors responsible for the huge amount of land transactions in a specific time period, which is otherwise not a regular phenomenon.

Land transfer from tribal to non-tribal in this area is a regular phenomenon since the 18th century. There are two processes contributing to these transfers. First, the land mortgaged to the moneylenders could not be regained due to very high interest rates and interlocking of land and credit market. Secondly, since tribal population dominates this area, most of the tribals primarily depend on shifting cultivation (slash-and-burn) and on forest for their livelihood. Shifting cultivation is a form of sequential agro-forestry, where forestland is cut, cleared and cultivated for a shorter period (for 2 years) and then left fallow for an extended period. This kind of cultivation is practised in the forested and hilly tracts. Since the tribals are not quite efficient with plough cultivation, their use of plain land for paddy cultivation is minimal. Hence, most often the plain lands are transacted to non-tribals under the pressure and requirements of funds. Such land transactions were regular in spite of the legal restrictions for minimising the land transfer from tribals to non-tribals. Under fifth schedule of Constitution of India, special power is bestowed on the Governor of the state to stop land alienation from Scheduled Tribes and Scheduled Castes. On the basis of this clause, Government of Orissa passed a bill banning tribal land transfers in 1956, known as OSATP Act 1956, where separate clauses are incorporated to protect the property rights of the tribals.

In spite of all the legal restrictions around five thousand acres of lands of local tribals was transferred to the outsiders. This feature was unusual on the basis of its earlier records. As many as thirty-eight villages were involved in such transactions. Therefore, to understand this unusual phenomenon we selected one of those thirty-eight villages namely, 'Gudanga' for our study. Gudanga is 20kms, from Muniguda the nearest town and 35kms., from Bisama Cuttack on the Raigada-Bhawanipatna highway. The total population of the village is 127 divided in 31 households. Among those only 3 households belong to Dom (Scheduled Caste) community and rest are from Dongaria Kondh (Scheduled Tribe) community. Another interesting feature in our study is that 25 out of 31 households, irrespective of size of landholding, depend on shifting cultivation which is legally an encroached land and ownership is uncertain from the State point of view.

In order to get an economic reasoning for the land transaction the following hypotheses are posed and analysed here:

1. There is no uniformity in land price across different size of landholding and the price does not always depend on the size or quality of land. The reverse also does not hold good.

2. The difference between actual land sold and willingness to sell shows that the probability of buying back the land or probability of losing the ownership plays a significant role in land transactions.
3. Land sold across any size of holdings invariably at a lower price implies higher landholdings do not always mean higher access to influence the system.

Supply Side Factors of the Land Market

The major cause of the huge land transaction was reported as the increased demand for land from the prosperous farmers of Andhra Pradesh, particularly of Kakinada, Vijaywada, Srikakulam and both Godavari districts. The prospective purchasers enter the land market through the Revenue Officials and the local agents. This is routed through the consumption and other credit provided by these agents to the prospective sellers. The land sold was mostly situated in the moderately sloped area and paddy land was not usually sold. One driving force behind buying these lands may be the commercial viability of these lands, particularly for cotton and tobacco cultivation. These moderately sloped lands and more so the climate of the region are suitable for cultivation of these two crops. Since the farmers of Andhra Pradesh have been cultivating these two crops and have well adapted to the market, availability of cheap and viable land in the adjacent region influenced them to buy a large tract of land for scale economy. But this alone does not explain the purchase of land. The more effective reason lies on the supply side and involves the two important components, viz., (i) intensity of the owner's (seller of land) economic dependence on land (ii) intensity of fund (money) required by the owner. In addition to this, the ratio of cash required for immediate purposes in the household and aggregate cash outflow of the household play an important role in the transaction.

Though land market was existing in the region for quite a long time, the market was always specified to the particular type of land, i.e., paddy lands. The market for this type of land also followed a distress institutional mechanism that was biased against the sellers. But this particular type of land sale and purchase was peculiar since the demand for land was not for the low paddy land, but for the moderately sloped land. These communities normally use this type of land for maize, ragi or other inferior millet production and these lands are not cultivated permanently. There was never a very high demand for such land by the locale. Though we have arrived at different classes of farmers according to the size of landholding, such class differentiation practically becomes less effective due to less intensive land use. Such conclusion can be arrived at due to many influential factors. For example, even a higher land-owning family also depends on shifting cultivation (technologically and anthropologically a primitive form of agriculture).

The differentiation in peasantry can also be marked in this village. A few observations can explain this phenomenon.

- i. Out of 31 households, 16 do not have paddy land and of the rest 15, 3 families own 62.5 per cent of the total paddy lands.
- ii. 8 families do not have moderate sloped land of which 6 families do not even have any paddy land. Almost 67.65 per cent of land is concentrated in the hands of 5 families, of which 3 families are those holding most of the paddy lands. So, the major part of the settled (patta) land is concentrated in the hands of 3 to 5 families.
- iii. 25 families depend upon shifting cultivation including the major land-owning families.
- iv. Totally 62.97 acres of land was sold from the village and 13 families were involved in this land transaction.

Table 1: Behaviour of land market across the classes

Class	NHSL	AL	LS as % of LH	LWS as % of LH	AR/ac (A)	EA/ac (B)	B~A
1	4	3.33	73.57	30.03	1611.53	3950.00	2338.47
2	3	4.03	71.22	24.81	1447.31	4166.67	2719.35
3	4	6.55	52.37	24.89	2098.15	5655.00	3556.85
4	2	48.08	32.11	14.56	1775.08	4100.00	2324.92

Notes: * Size of landholding is in terms of acres 1 = 3-4 ac.; 2 = 4-5 ac.; 3 = 5-7 ac.; 4 = more than 30 ac. (all exclude upper limit); **NHSL:** Number of households sold land; **AL:** Average size of landholding (in ac.); **ALS:** Average land sold; **ALWS:** Average of land willing to sale; **LS as % of LH:** Land sold as a per cent to landholding; **LWS as % of LH:** Land willing to sale as a per cent to land holding; **AR/ac:** Amount received per acre; **EA/ac:** Expected amount per acre.

It can be seen from Table 1 that land sold as a proportion to the total size of holding is highest in the smaller size of holding. This implies that the process of marginalisation may have a strong hold on this size class. It further comes out that the intensity of land required by the owner as against the intensity of cash required is much lower and hence, the transaction takes place. Farm households in the third category (holding size between 5-7 acres), have fetched and have a higher expectation of price implying that they are in safer limit of $(\theta_1/\theta_2) > (Ca/\theta_2)$. But the lower price for the large owner poses a puzzle. This may be due to less capital intensity or a labour-based economy, wherein the need for labour is more than that of land. Since the farmers in this class are in a situation like $\phi_1 < \phi_2$, the resultant effect is a lower bargaining power. This also contradicts the basic economic proposition by Bharadwaj (1985), that

Table-2: Labour disposition* particulars of the village according to class size

(No. of Human-days per year)

Class of farmers	Total Land	Family Members	Working Members	Male	Female	Own Firm	Hired Out	Forest	No Work
Landless	0.00	5.00	4.00	1.33	2.67	0.00	180.00	90.00	90.00
Marginal	2.00	5.00	3.50	1.50	2.00	160.00	60.00	65.00	75.00
Small	3.71	4.33	3.33	1.33	2.00	146.67	93.33	66.67	53.33
Semi-Medium	6.70	4.33	3.17	1.50	1.67	145.00	120.00	50.00	45.00
Medium	29.09	3.14	2.86	1.00	1.86	81.43	128.57	55.71	30.00
Av. of All	8.30	4.36	3.37	1.33	2.04	130.62	104.38	59.48	52.67

Note: *Labour disposition is in terms of number of days in different activities

large owners dominate the market setting, terms, and conditions of exchange as well as the contract. The farmers of lower size of holding are at a disadvantage due to the presence of the two factors i.e. $(\theta_1/\theta_2) > (Ca / \theta_2)$ and $\varphi_1 < \varphi_2$.

Another interesting feature of the region is that the economy is not highly monetised. Rather, the cash needs are often satisfied through borrowing. The demand for money arises due to the consumption needs for festivals and marriage, purchasing the PDS items and medical needs. Supply of money comes through selling of crops like oilseeds and pulses, forest products like *Mahua* flower and *Tendu* leaves and through selling the labour outside the village. Sometimes, credit also adds to the money supply. The cash needs of the household cannot be completely satisfied either through crop husbandry, sale of forest products or hiring out of labour because all of these depend on seasonal availability. We could observe that there is an increase in hiring out of labour even with the increasing size of holding, whereas there is a decreasing dependency on forest products.

Table 2, on labour disposition, shows a peculiar trend as against the normal expectation of an economist. Keeping apart the landless, two observations can be made: (a) There is a decline in own firm activity along with the increasing size of landholding. (b) Hiring out for labour activity is increasing along with the size of holding. One observable factor responsible for the case may be the declining number of working members in the family. This proposition is true specifically in a labour-based economy. But increase in hiring out may be due to the increasing cash need of the family which follows the condition, $\varphi_1 < \varphi_2$. This calls for seeking an explanation on the supply side.

Towards a Supply Side Explanation of Land Sale

There were a few possibilities to understand the land transaction in a market economic framework of neo-classical proposition. The first proposition is whether price (actual or expected) depends on the size of holding. As generally assumed, land in LDEs is considered as one of the vital factors of capital formation and assets holding. Therefore, higher size of holding may have greater command over price determination. The second proposition is, price (both expectation of price and prevailing price) determines how much land one sells or is willing to sell. Often both factors are present in an economy. There is also the possibility of simultaneity in this case. However, verifying these two propositions in our case was not possible due to the small sample size. It would however be interesting to go for a simultaneous formulation and identification of the causal relations to examine the nature of market and its response to the prevailing institutions in the LDEs. But the only possibility in our case was

to examine the one-to-one correspondence between the influence of price (i.e. both expected and actual) on landholding, land transacted and land willing to transact and vice-versa.

We tried to seek an explanation of the transactions in the land market under the hypotheses posed above. Initially we tried to understand the land actually sold and the land that the farmer was willing to sell. The two explanatory variables taken for the purpose were the prices received by the farmer and their price expectation based on the local market conditions. Contrary to the general neo-classical explanation of market conditions, we expected 'NO' relationship between the two. The reason is that the supply function does not work in the land market as it works in the market for other commodities. More surprisingly, the regression coefficients had a negative sign but the statistical property of the coefficient prohibits us from commenting on the coefficient. Similarly, the explanation of the land sale by taking expected price as a dependent variable also did not yield theoretically consistent results.

Table 3: Explanation of Land Transactions: Results of Regression Analysis

Dependent variable	Independent variable	Intercept	Slope	Adjusted R ²
Price Received	Size of holding	1745.63 (14.9)	0.255 (0.04)	-0.09
Expected Price	Size of Holding	4719.46 (6.43)	-15.112 (-0.41)	-0.075
Price Difference	Size of Holding	2973.83 (4.27)	-15.37 (-0.44)	-0.072
Actual Land Sold	Price Received	6.492 (0.767)	-9.42 E-04(-0.198)	-0.087
Actual Land Sold	Expected Price	6.743 (1.82)	-4.18 E-04 (-0.56)	-0.061
Actual Land Sold	Price Difference	6.061 (2.28)	-4.35 E-04 (-0.56)	-0.061
Land Willing to Sell	Price Received	2.46 (0.6)	-1.94 (-0.084)	-0.09

Notes: i) Results pertain to a single variable Linear Regression

$$(Y_i = a + bX_i + u_i)$$

- ii) Figures in the brackets are t values. Price Difference is the difference between expected prices and price actually received.

Conclusion

This paper is an attempt towards forming a set of hypotheses on the behaviour of the land market in LDEs. There is a need for intensive field-level explanation for arriving at any conclusion. But it is essential to note the importance of a few factors like nature of the economy associated with cash need of the family and cash flow (land related or otherwise) which influence the process of determining the land market transactions. Another incidental inference could be that size of landholding alone is not

a sufficient factor to explain the level of peasantry specifically in a less monetised subsistence economy. The land market functions mainly through the supply side determinants, and specifically via the intensity of land required by the owner, intensity of funds needed for immediate purpose and aggregate cash outflow of the household. This has been cast in a systematic framework.

Notes

1. Tribal areas in India are topographically categorised as hilly and mountainous ranges of the country.
2. Quality as well as size of land is incorporated in the traditional measurement system. The quality of land is called, *Aat, Mal, Berna, Berchha and Bahal* in western and southern Orissa according to the decreasing slope of the land respectively. Similarly size of the land is measured in terms of *Pauti, Maan, Ada* or *Sula* according to the amount of seeds sown in the land. One *Maan* is equivalent to about 3 kgs of cereals or 4 kgs of pulses. One *Pauti* is equal to 20 *Maan*, one *Maan* is equal to 4 *Ada*, and one *Ada* is equal to 4 *Sula*.

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