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# Rural Indebtedness : Concept, Correlates and Consequences

A Study of Four Tribal Villages in the North Lakhimpur Subdivision, Assam

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**1. Introduction:** Indebtedness has been acknowledged as one of the most infamous stumbling blocks in the way of rural prosperity. It is cancerous, self-perpetuating, malignant and maleficent. It abates agricultural production, abashes social psyche, aggravates inequalities in the distribution of socioeconomic opportunities and benefits, arrests social progress and misdirects social efforts.

Within the given institutional structure of the Indian society it is felt that a cure for indebtedness is extremely difficult, if not impossible. It is so because poverty, coupled with unequal distribution of economic resources, breeds indebtedness, which in turn, consolidates the causes of poverty and distributional injustice. This vicious circle can, of course, be broken, but it requires a strong social will and a manifestation thereof in determined efforts to eradicate the problem of rural poverty and indebtedness.

There is a pressing need for identification of the weaker links of the said causal chain that makes the vicious circle. A prudent strategy to break the circle would attack these weaker links. The task of identification of the weaker links necessitates social research to be carried out. We must note that the problem of rural indebtedness is not sociological, economic or political problem in isolation; it is a serious and crucial problem that has its roots in the social, political and economic texture of the society.

**2. Indebtedness - Resolution of Some Conceptual Issues:** We envisage that 'indebtedness' is a term surrounded by several overtones and therefore, the concept must be freed from the penumbra of fuzziness caused by the cacophony. In our context, the cacophony has been mainly due to the discordant overtones, some emanating from the indigenous background and others from the exotic ones.

The lexicographic meaning of 'indebtedness' is the state (of a person, family or organization) of being under obligation (more often financial in nature). This meaning is largely free from overtones, but it is too wide to represent the concept that we intend it to do. We are aware of the fact that many households borrow for enterprise and repay the lender a share of the gains from the enterprise. Depending on the socioeconomic conditions, the dividend or the tribute paid to lender has been acknowledged as a payment or reward for abstinence from consumption, a reward for waiting, a reward for cooperation that has helped the enterprise to accrue gains or a reward for parting with the liquidity with an opportunity cost of speculative gains, that is, a reward for speculative gains foregone. When indebtedness has an overtone that reflects any of the meanings noted above, it refers to an enterprising society requiring financial resources for investment. A student of the history of economic thought in the West is aware of the theories of interest that developed after the Industrial Revolution.

The optimistic hue may, however, be illusive if we forget that under certain socioeconomic conditions (quite familiar to us) the tribute paid to the lender is a payment

made by the victim of the socioeconomic circumstances to those who command coercive powers and the social sanction for exercising those powers. The Marshallian 'quasi-rent' has, no doubt, an element of the same in it, but its imports have been buried under the gross optimism in the natural providence for the social progress. Thus when we use the term 'indebtedness', we at once are striking two strings; one of the harshness of our Indian experience and the other of our learned optimism imported in effect of the economic theories.

History teaches us the account of the reproach received by the lenders and usurers from most of the religious scriptures and social reformers. Socrates had his last wish that they should not forget to repay the debt of the cock that he owed to repay. Then indebtedness must be a curse, a plight, and a desolating experience. The social sanction of lending since the sixteenth century speaks volumes of the changes in the socioeconomic condition of Europe while borrowing emerged as a means to financing enterprises and lost the connotation of the plight of the indebted. But indebtedness of the Indian rural people is yet to lose the said connotation.

In the Indian rural context, therefore, indebtedness should be pre-empted of the overtone of optimism. Indebtedness is not the state of being under the financial obligation undertaken on account of productive utilization of resources promoting economic achievement of the borrower; rather, it is the state of being under the financial obligation undertaken on account of compulsion and being ensnared in the cobweb of usury. The borrower need not repay his debt in terms of a pound of flesh; a pint of fresh blood would suffice.

Indebtedness of an Indian rural household often finds its genesis in the borrowing on account of certain exigencies like accident or illness of a member of the household or a pressing need for certain social occasion like marriage, etc. First, because a household hardly saves enough to meet such needs and second, because there is no provision for institutional borrowing in such cases, the only source of loan is the local money lender who charges exorbitant interest for such a loan. Now the borrower does not have enough resources or income to enable him repay the debt, the principal multiplies itself rapidly to ensnare him in the cobweb of usury. More often than not, he makes a provision of repayment by either mortgaging his land or his labour captivating his sources of income to disable him pay his debt off. Very soon he is drowned in debt.

Sometimes indebtedness originates in the loan incurred for productive activities as well. We know well that farming in most of regions of India is to gamble with nature. If not the flood, then the drought, and if the farmer is lucky, then an untimely rainfall! A farmer who has financed cultivation by borrowing has now a scant chance of paying off his debt. If he has succeeded in raising some production, he is forced to dispose it off to the lender. In the literature on agricultural economics in India we often come across the terms like 'forced surplus' and 'perverse supply of food grains', etc. Indebtedness of the Indian peasantry explains all these 'surprises' and 'paradoxes' of a 'standard economist.' If prices of the agricultural produce increases (during the period between the current and the next crop season) by a growth rate  $r_1$  and the principal (debt) multiplies itself by a growth

rate  $r_2$  such that  $r_1$  is less than  $r_2$ , the current value of the output  $X$  as a means to optimize the debtor's gain is optimal only if  $X$  is sold at the current prices. Hence the farmer sells his produce at the harvest prices and pays his debt off.

We note therefore that indebtedness in the Indian rural context must be resonant with :

- (i). unproductive usage of loan,
- (ii). usurious ensnaring of the borrower,
- (iii). captivation of productive resources,
- (iv). exercise of coercive and exploitative economic and social powers by the lender,
- (v). compulsion, plight, misery and feeling of guilt and helplessness,
- (vi). erosion of social status of the borrower.

Thus viewed, indebtedness is not to be taken lightly and certainly not with an optimistic hue portrayed by the 'standard economics.'

**3. Measures of Indebtedness:** To measure the degree or intensity of indebtedness we must devise an index that represents all the six characteristics mentioned in the preceding section. For constructing such an index we may take a number of indicators that represent one or more of these six dimensions. We propose the following indicators for the same:

1. Amount of unproductive or consumption loans (per capita) incurred by the household,
2. Per capita interest payment by the household,
3. Per capita loan as a ratio to the value of productive assets held by the household,
4. Amount of loan per cultivable area of land owned by the cultivator household,
5. Per capita loan as a ratio to the repaying capacity of the household. The repaying capacity, of the household may be defined in terms of savings, that is, the net income of the household over and above consumption expenditure and working expenses,
6. Percentage of land holding/labour days made available to the lender on mortgage,
7. Forced sale of produce when prices are low (e.g. in the harvest season) or working for the lender in the seasons of peak demand for labour, as a ratio to total disposable produce/labour days,
8. An appropriate measure of the feelings of compulsion, guilt and helplessness,
9. An appropriate measure of the feeling of offense to social status/erosion of social status,
10. An appropriate measure of a feeling about the coercive powers exercised by the lender.

It is obvious that the empirical work on constructing the indicators noted above may face a number of operational difficulties. The last three indicators may invoke the techniques often applied in psychology and attitudinal sociology.

**4. An Empirical Analysis of Indebtedness:** Here we propose an empirical study to measure indebtedness, identify its correlates and to assess the consequences of indebtedness on the productive and distributive performance on the rural economy. For this study we have collected primary data from four tribal villages of North Lakhimpur Subdivision of Lakhimpur district, Assam. These villages are : (1) Bori Mori Mising Village, (2) Bhati Sonowal Charchari village, (3) Margo village, and (4) Charimoria Boro

village. The selection of these villages has been made purposively. We hold the opinion that the tribal population in the rural areas of Assam has been least exposed to the credit programmes launched by the public agencies and hence a study of indebtedness provides us with a deeper insight in the problem.

Among the four villages mentioned above, the first one is inhabited by the Mising tribe, the second and the third by the Sonowal tribe and the fourth one by the Boro tribe. We have been purposive in such a selection with a view to study the intertribal differences, if any, in pattern and correlates of indebtedness (for details, see Mitra, 1987). All these villages are located in almost similar geographical and agro-infrastructural setting, some 30-40 miles away from the smallest town around.

Sixty households inhabit the first village and the second village (each) while 42 and 40 households inhabit the third and the fourth ones respectively. We decided to collect data by systematic sampling and to cover 50% of the total population. This decision has been mainly accounted for by our intention to avoid the stratification, if any, and to collect suitably large samples to facilitate estimation and keep up its efficiency. Thus we have thirty households from each of the first two villages. And 21 and 20 households from the third and the fourth villages respectively. We approached the sample households with pre-tested questionnaires and interviewed them to fill in the questionnaires. The period of interview was July-August 1986.

Out of 101 households interviewed by us, we found 82 of them under the financial obligation. This reveals the extensive aspect of indebtedness. About 50% of the borrower households have a per capita burden of loan exceeding Rs. 120. To represent the distribution of borrowers in accordance with the burden of debt, we fitted a curve of the nature  $(\log N(L))^2 = 24.733 - 0.9664 L^{1/2}$ ;  $R^2 = 0.97$ . We define  $N(L)$  as the number of households under the burden of per capita loan exceeding Rs.  $L$ . The empirical curve has a great power of representing the borrower households' distribution shown by the value of the coefficient of determination,  $R^2$ .

**5. Leading Measures of Indebtedness - A Principal Components Analysis :** In section 3 above we proposed to define a measure of indebtedness. Now we try to empirically identify such measures. We have taken five indicators for this purpose. They are:

- i. Amount of loan on per capita land owned by the household =  $Z_1$
- ii. Per capita loan as a ratio to the repaying capacity of the household =  $Z_2$
- iii. Per capita loan as a ratio to the value of agricultural assets owned by the household =  $Z_3$
- iv. Per capita interest payment by the household =  $Z_4$
- v. Per capita amount of loan taken by the household =  $Z_5$

In identifying such measures of indebtedness we have been constrained and unable to collect data/response of the sample households that could enable us to incorporate other factors of indebtedness.

We have carried out Principal Components Analysis to identify the leading measure of indebtedness as represented by and contained in the five variables mentioned

above. The inter-correlation matrix of the indicators of indebtedness is presented in table-1 below.

**TABLE -1**  
**Correlation matrix of Indicators of Indebtedness**

Variables	Z1	Z2	Z3	Z4	Z5	Mean
Z1	1.00	0.36	0.01	0.61	0.54	181.47
Z2	0.36	1.00	0.07	0.68	0.76	0.12
Z3	0.01	0.07	1.00	0.24	0.37	0.15
Z4	0.61	0.68	0.24	1.00	0.87	18.01
Z5	0.54	0.76	0.37	0.87	1.00	157.93
Std. Dev	148.86	0.136	0.123	9.33	91.81	-

The eigenvalues and eigen vectors of the correlation matrix are presented in table 2 below.

**TABLE -2**  
**Eigenvalues and Eigenvectors of Correlation matrix of Indicators of Indebtedness**

Vector	First	Second	Third	Fourth	Fifth
First	0.720	-0.390	1.000	-0.582	-0.031
Second	0.850	-0.160	-0.820	-0.830	-0.336
Third	0.334	1.000	0.280	-0.352	-0.213
Fourth	0.980	-0.040	0.042	1.000	-0.634
Fifth	1.000	0.122	-0.157	0.262	1.000
Eigenvalues	3.012	1.021	0.648	0.222	0.097

This analysis indicates that the first leading measure of indebtedness is  $Z_5$  explaining 60% of the total variation in the indicators of indebtedness. The second measure is identifiable with  $Z_3$  and it explains about 20% of the total variation. The third measure is identifiable with  $Z_1$  explaining 13% of the total variation. Together,  $Z_5$ ,  $Z_3$  and  $Z_1$  explain over 93% of the total variation in the data.

Thus we conclude that  $Z_5$ ,  $Z_3$  and  $Z_1$  together can very well represent the measures of indebtedness. However, if we must use a single measure, then  $Z_5$  would be the most suitable measure. Thus observed, per capita magnitude of loan and its proportion to the land assets and production adequately measure the severity of indebtedness.

**6. Consequences of Indebtedness:** First we envisage that indebtedness leads to a decline in productivity on the farms of the borrower households. It is now a widely acknowledged fact that agricultural productivity declines with an increase in the holding size. Along with this we have taken four other variables, representing indebtedness, to

explain the observed productivity on the farms of the borrower households. After a detailed specification analysis we have reached at the conclusion that productivity has the following empirical relationship with the holding size and the variables of indebtedness :

$$P = 451.70 - 84.967 X_1 + 0.4208 X_2 - 10.1649 X_3 - 63.5189 X_4 + 118.1514 X_5 ; R^2 = 0.967$$

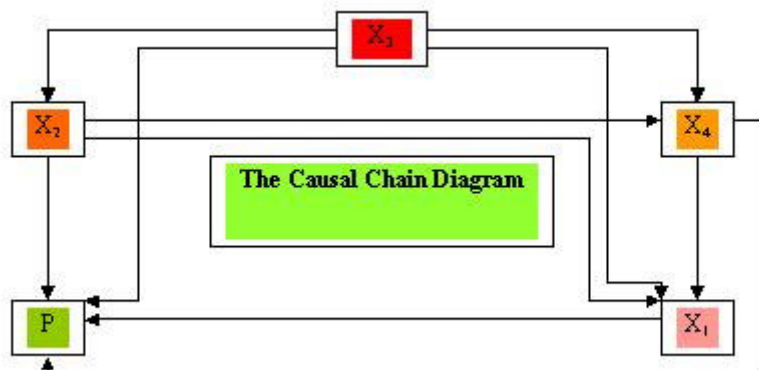
(2.87)                      (1.81)                      (0.49)                      (1.80)                      (3.82)

where P = productivity (value of farm production per bigha of land); X<sub>1</sub> = holding size (in bigha); X<sub>2</sub> = loan per bigha of land holding; X<sub>3</sub> = loan per rupee of repaying capacity; X<sub>4</sub> = loan per rupee of value of agricultural assets; X<sub>5</sub> = dummy (binary) variable to take care of outlier observations in the sample that were causing abrupt variations in the error. Figures in the parentheses are computed t values.

Except for the coefficient associated with X<sub>2</sub>, the signs of other coefficients are as expected. A specification analysis carried out by us reveals that the estimated model is free from the pitfalls of specification errors caused by inclusion of irrelevant variables or exclusion of relevant variables. The residual vector has shown the desirable properties.

We conclude therefore that indebtedness affects the productive performance of the borrower households adversely. Thus it has a damaging effect on the productive performance of the rural economy.

**7. Effects of Indebtedness - A Causal Chain Analysis :** We have carried out a causal chain analysis to identify the process in which indebtedness affects productivity. The causal chain analysis is based on the idea that the relative variances of any two variables can give an indication of the causal direction. The 'cause' variable has a greater degree of explanatory power.



This analysis has provided us the causal chain diagram. The diagram indicates that X<sub>3</sub> is the point of incidence of indebtedness. That is, first, the household is caught in debt due to deficit expenditure. This captures his land and productive assets (X<sub>2</sub> and X<sub>4</sub>). Ultimately, his production performance is adversely affected.

It is to be noted in this diagram that X<sub>3</sub> reinforces X<sub>2</sub>. However, P, X<sub>1</sub> and X<sub>4</sub> do not reinforce X<sub>2</sub> or X<sub>3</sub> and thus cannot make a strong vicious self-perpetuating chain of

indebtedness. This gives us a ray of hope to suggest that to break the  $X_2 - X_4$  tie it would suffice to help the farmer in keeping his agricultural assets away from being captured by the cobweb of indebtedness.

**8. Distributive Effects of Indebtedness:** On an average, per capita debt on the households of our study villages is Rs. 158 that amounts to about 20% of the per capita income. It is a substantial burden on which they have to pay about 12% per month rate of interest. At this rate, the principal would be double within 8-9 months. But this is only an initial point of the distributive effects of indebtedness.

Our sample data reveals that about one third of the total agricultural output is sold immediately after harvest, a large portion of which goes out for paying off the debt or interest on it. The debtor has to dispose off the produce at the harvest price, which is at the lowest.

Our findings reveal that about a half of the total land owned by the sample household is mortgaged against loan and about 50% of the agricultural labour households have mortgaged their labour to work for the lenders. These figures are indicative of the adverse distributive effects of indebtedness on the rural tribal community.

We run short of the time series data that could have shown the extent of land and resources being transferred from the hands of debtors to the lenders. But we may safely guess by the figures on land mortgaging the severity of the problem. The dynamics of land and resources accentuating inequalities ultimately affect the pace of development of the rural society and in this dynamics indebtedness is playing a powerful instrumental role that we must recognize before it is too late.

**9. Concluding Remarks:** To conclude, first we summarize our attempts to analyze the nature, significance and impacts of indebtedness. We have observed that in the Indian context rural indebtedness is resonant with the overtones of unproductive usage, usurious ensnaring and deplorable condition of the poor farmers and agricultural labourers. To help the rural people out of indebtedness we require to carry out empirical investigations for understanding the process in which indebtedness becomes self-perpetuating. We have surveyed four tribal villages and based on the data thus collected identified some measures of indebtedness that can help us operationally in analyzing the incidence, process and impacts of rural indebtedness. These measures are per capita loan and per capita loan per agricultural asset held by the households and these measures are good representatives of the degree of indebtedness.

We have analyzed the productive and distributive effects of indebtedness and found that it leads to decline in agricultural productivity, captivation of productive resources and aggravation of inequalities in the rural community. Further, our finding is that indebtedness is initiated by unproductive expenditure. This in turn captivates agricultural assets, abates productivity and reduces the repaying capacity of the borrower.

Our study may suggest that in order to ameliorate the conditions of the indebted rural mass we have to motivate them to minimize conspicuous consumption, especially if the households cannot afford it without borrowing. Educational planning may help us to attain this goal of making the rural mass aware of the merits of prudence and the demerits of conspicuous consumption. Further, to stop the captivation of productive assets, institutional loan should be provided on easy terms. This objective may be attained by making the cooperative and bank loans easily available.

### **References**

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