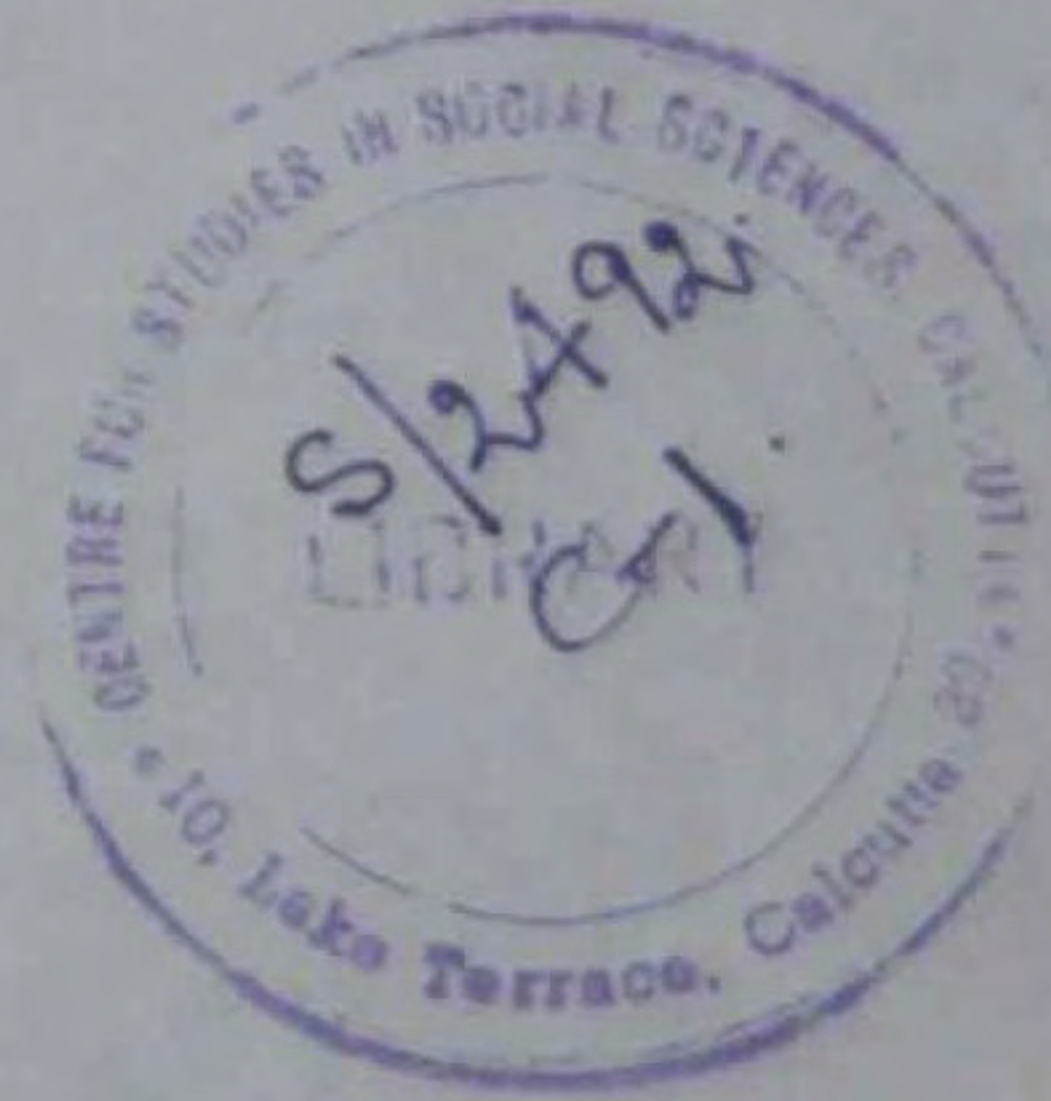


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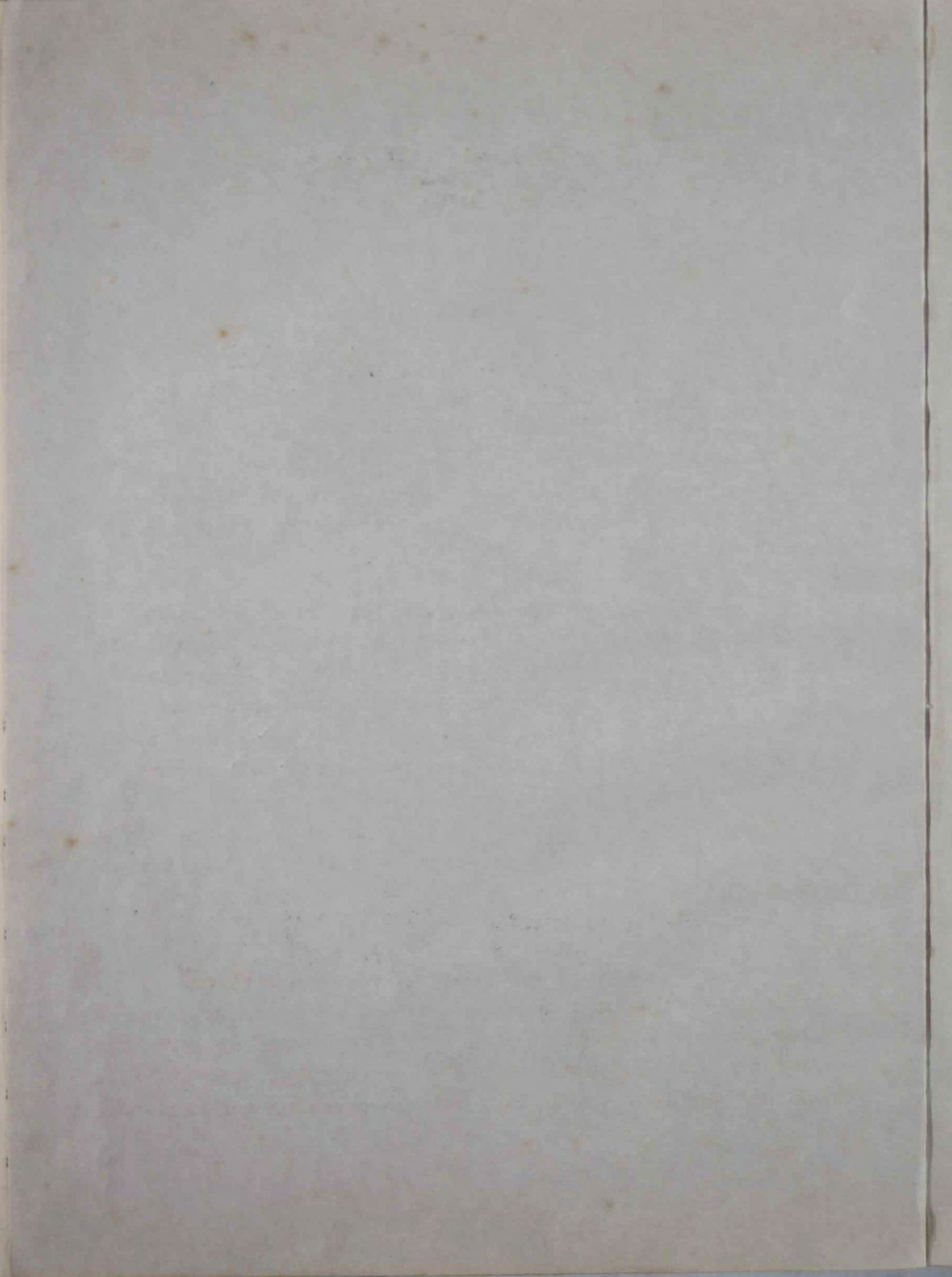
PEASANT INDEBTEDNESS AND DISPOSSESSION : A
STUDY IN THE REGISTERED DEBT AND SALE OF
LAND IN WEST BENGAL DISTRICTS 1901-41.

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Peasant Indebtedness and Dispossession : A
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(1901-41)

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The object of this paper is to examine land transfer as an aspect of peasant indebtedness and poverty in the predominantly paddy-growing districts of West Bengal during the first four decades of the twentieth century.

Section I of the paper, refers to an impugned hypothesis which relates commercialization of agriculture to the peasant prosperity in the context of a colonial economy. It then goes on to show that the extent of involvement of the small peasants in the process of asset transfer was quite high and they usually entered into loan contracts to meet their deficit in terms of rice balance. All this implies that a section of the peasantry with small holdings and inferior land rights did not reap much benefit from the growing market for agricultural produce in colonial Bengal.

Section II of the paper makes a **statistical** analysis of the peasants' debt behaviour in terms of annual fluctuations in the number of mortgage deeds vis-a-vis the year to year fluctuations in the pre-harvest price of rice and per capita rice production. In choosing the explanatory

variables we take note of the situation that the extent of household deficit would fluctuate along with the fluctuations in household production and fluctuations in the price of rice during lean season when borrowings were generally made. Since no time series for household production for different classes of the peasant producers can be constructed from the available data for acreage and output, we have to choose the time series in the fluctuations of per capita rice production as a proxy for the fluctuations in household production (of the peasants contracting usurious loans) over time. A good harvest did not always mean that the household could avoid buying rice in the lean season and incurring debt. It might have to part with its produce even in times of good harvests to meet its obligations for past debt and buy rice, specially during the pre-harvest season. The borrower would, therefore, make most of their contracts in the lean season when its deficit in terms of rice balance should be at its maximum.

Section III brings out the patterns of the peasants' choice between two forms of asset transfer, viz., mortgages and sales of immovable property. The deficit household would, first, opt for securing advances against mortgages of assets to meet their subsistence requirements, but in case of a substantial decline in the rice equivalent of such advances they would have to resort to sale of assets. An attempt has, therefore, been made in this section to correlate annual fluctuations in the sale of immovable property to the annual fluctuations in the aggregate value of mortgages deflated by the annual average of the retail price of common rice (the latter series are referred to in section II).

It was not, obviously, possible for an indebted peasant to postpone sale of assets indefinitely by contracting loans against mortgages of properties. A high proportion of loans against mortgages (especially, of land) turned out to be bad debt and ultimately led to transfer of collateral in the lender's favour by court decree. Since the time lag between such mortgages and sale of assets and the exact percentage of encumbered assets transferred are not known, an accurate estimate of the degree of responsiveness of the sales to the fluctuations in mortgages over time can hardly be made. An attempt has, however, been made to correlate sales of immovable property (with a time lag) to mortgages of such property in section V.

The results obtained from the statistical exercises made in sections II, III and IV would help form an explanatory hypothesis for the peasant's asset transfer : it was an aspect of his deprivation and any attempt to explain the transfer phenomenon in terms of a smoothly functioning competitive market mechanism is likely to lead to absurd results.

Furthermore, it should be clearly stated that the rate of sales of land as such cannot be taken as an index of either of the rate of alienations of land from the peasantry or of the degree of concentration of land holding or its change over time. In order to infer either of the two kinds of changes from data on land sales one must have an idea of the initial degree of the concentration of land and of the economic and social status of the sellers of land as against the buyers of land. The following analysis of the crude data of land transfer must be viewed in the light of the cautionary statement made above.

Section I

The growing volume of indebtedness of the Bengal peasantry during the colonial period was not an indication of their increasing investment in productive activities. It was, on the contrary, an expression of their progressive pauperization culminating in alienations of land. The peasantry with small holdings and inferior land rights failed to reap much benefit from the growing market for agricultural produce because its process of production and marketing was brought under the control of the agricultural creditors and the money-lending traders through a massive deployment of usurious capital.

M.M. Islam, however, proposes an alternative hypothesis claiming that commercialization of agriculture in British India was not a 'forced and artificial process' and it meant a certain degree of solvency of the producers [1980, p.33]. He observes in this connection that the problem of indebtedness was less acute and interest was significantly lower in the commercialised districts than in the districts in which production was dictated by domestic needs. [Ibid., pp.36-37]. This observation is largely contradicted by the Bengal Provincial Banking Enquiry Committee's (BPBEC) findings that the rates of interest were lower in western and central Bengal than in eastern and northern Bengal [GOB : BPBEC : 1930, Vol.I, Part II, p.198].

We, however, find no systematic evidence of correlation between the degree of commercialization and either the rate of interest charged or the freedom from indebtedness. There are numerous pieces of evidence to show that the highly commercialised districts of northern and eastern Bengal

witnessed usury in its worst forms and a large section of the peasantry had been alienated from their holdings because they were trapped in debt.¹ This holds good for any small peasant, either he is a jute grower or a paddy producer. A small paddy producer, even when he was incapable of generating saleable surplus, had to operate in the produce market as a seller. His participation in such market as a buyer was also inevitable because he usually ran short of his consumption requirements round the year in terms of rice production. A jute grower with small holdings had been likewise involved in both the market specially in times of bad harvests or when the jute-rice price ratio moved downwards. While pointing out the causes of agricultural indebtedness in colonial Bengal, M.A. Huque asserted,

"the tragedy of indebtedness is very much accentuated by the fact that the agriculturists borrow for procuring food".

[Huque: 1939, p.157]

Now the question is : how do we know that the loans were contracted mostly by the small peasants for procuring food ? The registration figures of sales up to 1935, as shown in Table 1 indicate that the number of transfer deeds of immovable property having value below Rs.100/- had been higher than that of the deeds of higher unit value in all the reference districts excepting Howrah, 24-Parganas and Jalpaiguri. This implies that the small peasants were more involved in the transfer process than their big counterparts. Available evidence also suggests that a very high percentage of advances against mortgages could not be repaid and the collateral had to be

Table 1

Percentage of Sales of Immovable Property (number of deeds) below Rs. 100/- in value (Sections 54 and 118 of the Transfer of Property Act) in Total Sales

	Burdwan	Birbhum	Bankura	Midnapore	Hooghly	Howrah
1901	60.52	69.86	65.47	71.49	65.08	59.25
1902	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1903	60.67	69.80	63.91	75.09	66.36	59.60
1904	61.15	73.02	65.03	75.87	65.34	58.31
1905	63.30	73.57	65.52	75.51	64.66	57.79
1906	61.52	72.93	64.08	71.90	64.98	56.26
1907	59.11	70.00	60.50	67.45	62.94	52.73
1908	60.25	70.14	58.96	66.28	62.97	52.40
1909	58.58	67.63	57.43	65.52	61.41	50.70
1910	60.10	70.17	59.67	65.88	61.30	50.15
1911	60.42	71.27	59.45	65.11	61.00	49.96
1912	59.26	69.23	58.69	64.43	61.27	49.19
1913	56.82	69.72	56.73	62.52	57.30	47.24
1914	55.45	67.48	56.34	62.80	58.00	45.91
1915	54.74	67.19	56.94	65.09	57.32	49.59
1916	55.48	69.35	58.07	63.77	57.06	47.92
1917	54.31	69.49	55.18	63.81	56.85	46.41
1918	55.71	70.04	56.13	66.61	56.26	45.47
1919	53.19	66.33	53.41	60.76	53.69	44.97
1920	54.29	64.35	52.75	58.75	53.16	42.83
1921	53.11	64.84	52.33	57.66	50.97	41.89
1922	51.18	65.55	50.74	56.39	50.20	39.96
1923	50.50	62.07	50.94	55.54	49.96	40.44
1924	50.96	65.83	49.07	55.68	50.72	39.63
1925	49.41	63.32	48.38	52.79	51.42	37.71
1926	48.32	63.34	49.18	52.48	49.44	37.60
1927	48.06	63.45	47.27	52.14	49.56	38.09
1928	49.93	68.35	46.83	48.70	49.23	37.96
1929	44.44	62.92	45.03	47.36	44.39	34.28
1930	42.27	60.34	46.65	49.24	40.36	32.52
1931	45.69	64.26	48.82	57.41	43.86	35.61
1932	48.86	65.92	50.51	61.63	48.37	39.93
1933	52.32	70.06	50.20	65.39	49.81	43.77
1934	55.88	73.53	53.53	65.97	52.40	46.57
1935	57.33	73.85	54.09	65.77	52.87	49.12

Table 1 Contd.

	24-Parganas	Nadia	Murshidabad	Dinajpur	Jalpaiguri	Malda
1901	54.17	61.51	72.32			
1902	N.A.	N.A.	N.A.			
1903	56.24	60.54	72.76			
1904	53.97	61.87	74.36			
1905	52.10	61.31	75.11			
1906	51.81	61.55	73.11			
1907	49.63	59.55	71.41			
1908	50.08	57.74	73.65			
1909	45.57	57.92	72.87			
1910	45.33	55.88	73.39			
1911	45.53	55.16	73.86			
1912	47.11	53.22	72.27	64.55	24.96	74.65
1913	45.29	49.90	72.87	64.54	24.38	73.95
1914	42.79	48.20	71.99	62.31	24.59	71.41
1915	44.10	51.43	71.06	63.66	25.59	73.16
1916	43.13	50.60	72.75	60.74	24.81	71.75
1917	43.22	51.94	71.13	60.18	19.23	69.18
1918	41.98	52.69	75.62	65.33	24.74	70.99
1919	39.69	51.78	71.42	63.68	22.59	71.27
1920	37.65	48.17	69.45	60.15	20.31	67.14
1921	39.20	48.12	68.63	60.23	21.11	64.41
1922	37.84	46.59	68.13	58.73	21.80	60.04
1923	36.38	48.61	65.80	59.44	18.54	57.92
1924	36.64	47.13	68.23	61.06	19.67	59.11
1925	36.97	46.89	65.64	56.65	18.14	47.64
1926	37.14	45.91	65.61	54.33	17.69	57.95
1927	36.73	45.88	65.63	54.91	16.06	59.78
1928	35.00	48.37	68.79	57.31	16.68	60.17
1929	33.62	48.23	63.08	51.74	15.33	55.93
1930	33.43	46.52	59.06	52.26	12.77	52.26
1931	36.61	47.43	65.02	60.35	17.60	58.92
1932	39.88	45.69	65.25	65.22	22.69	62.90
1933	42.10	49.29	67.63	71.20	28.31	64.88
1934	45.17	51.05	70.19	73.55	34.47	66.41
1935	45.76	54.05	71.81	75.94	34.75	66.26

Source: GOB: Statistical Returns (Annual/Triennial) Registration Department, (1901-35).

ultimately transferred to the creditors in the form of sale or exchange.²

The fluctuations in sales were, therefore, associated largely with the fluctuations in mortgages. Since the proportion of sales of lower unit values (below Rs.100/-) in total sales had been dominant, fluctuations in mortgages of lower unit value explain to a great extent the fluctuations in sales. This clearly suggests that the loans against mortgages were contracted mostly by the small peasants who ultimately lost their collateral to the creditors to a great extent or who had to sell their non-collateral assets, viz., parts of their land-holding, to other buyers to make repayments for their accumulated debts.

The Registration Department, Government of Bengal, provided a lot of evidence to show that the number of registrations of mortgages and sales usually rose in times of food scarcity and high prices of foodgrains.³ This indicates that the volume of registrations could have been significantly affected by that section of the peasantry the asset position of which was vulnerable to the fluctuation in food production and prices. That is why we should look into the data for availability and production of food for ordinary peasants.

The available estimates of per capita availability of foodgrains clearly indicate that the pace of pauperization of the peasantry was fairly rapid during late colonialism in Bengal. According to George Blyn estimates there was a long-term decline in foodgrain availability in the Greater Bengal area. From 1901 to 1941 the total decline in per capita foodgrain tonnage of output was 27 per cent, and in pe

capita foodgrain availability 24 per cent. Changes in grain trade flows, in his opinion, did little to offset the adversity caused by the decline in foodgrain output.

[Blyn: 1966, pp.105-077] However, the estimate includes all food crops and the study makes no mention of the situation in Bengal proper.

The extent of the adversity caused by the decline in foodgrain output is largely indicated by our estimated trends in per capita rice production (PCRP) in the districts of West Bengal.

Table 2
Trends in per Capita Rice Production

District	Period	a	b	S E (b)	R ²	T Value	Trend Rate of Growth: Percent per Annum
Burdwan	(1901-41)	2.862	0.012	0.003	0.257	-3.723*	-2.725
Birbhum	"	2.893	0.006	0.002	0.163	-2.754*	-1.372
Bankura	"	2.587	0.002	0.003	0.010	0.616	0.462
Midnapure	"	2.711	0.004	0.001	0.003	-0.328	-0.092
Hooghly	"	2.464	0.009	0.002	0.378	-4.610*	-2.051
Howrah	"	2.101	0.008	0.002	0.291	-3.737*	-1.825
24-Parganas	"	2.651	0.009	0.001	0.521	-6.512*	-2.051
Nadia	"	2.685	0.004	0.003	0.070	1.723**	0.925
Murshidabad	"	2.431	0.001	0.002	0.004	0.413	0.231
Dinajpur	(1912-41)	3.238	0.004	0.003	0.070	1.473	-0.917
Jalpaiguri	"	2.866	0.003	0.003	0.036	0.999	-0.688
Malda	"	2.872	0.016	0.003	0.463	4.918*	-3.617

Sources: GOB: Season and Crop Report (1901-41)
GOI: Census of India, Decennial Reports, 1901-41.

* Significant at \angle 1 per cent level.

* Significant at \angle 10 per cent level.

a & b in Col.3 & 4 indicate the respective Intercept and Slope values of the Semi-log Trend.

Table '2 shows that in all the districts of the Burdwan division PCRP declined remarkably during the period 1901-41 with the lone exception of Bankura where no trend has been found. Among the reference districts of Presidency division no trend in PCRP has been traced for the period in the cases of Nadia and Murshidabad, whereas the districts of 24-Parganas witnessed a strong declining trend. PCRP also declined over the period 1912-41 in the district of Malda, but it showed no trend in case of the rest of the reference districts of Rajshahi division. In most of the districts the declining trend in PCRP was so strong that the grain flows could do very little to arrest the decline in per capita availability of foodgrains.

Mukherji observed, 'during the first two decades of the twentieth century per capita availability of rice had declined considerably in Bengal proper, as a whole, as well as in most of its constituent regions, and any further deterioration would perhaps have had led to famine-like situations'. He, however, noticed a slight improvement in the situation during the 'thirties. His estimated figures of the average of per capita net availability for the periods 1916-20 and 1933-37 have been 4.56 maunds (376.96 lbs.) and 4.75 maunds (392.67 lbs.) respectively. [Mukherji [1982, p.259] Both the figures seem to be lower than the standard rate of consumption requirement of 9 maunds (744.00 lbs.) of paddy per head per annum as estimated by the Land Revenue Commission (LRC), Bengal.⁴

Cultivated land per capita was evidently declining during late Colonialism. The rapid decay of traditional industries released a huge work force. Kingsley Davis estima

that the number of acres per person engaged in agriculture in the permanently settled Zamindari area declined from 2.42 in 1900 to 1.90 in 1940. [I951, p.208] Blyn observed in this connection that the agricultural work force must have increased since there had been a decline in non-agricultural labour force between 1891-1931 despite the rise in population. Increasing intensity was also associated with decreasing yield per acre throughout the period 1891-1947. [Blyn: 1966, pp.209-10] This would have obviously raised the number of deficit households and the extent of household deficit as well.

The situation, narrated above, was favourable to the growth of a credit market where a resourceful lender faced a borrower with pressing credit needs. The borrower in question was a typical peasant whose operations in the credit market at any given time were constrained by the smallness of his absolute income and a large volume of initial debt. These constraints acted upon the debtor-creditor nexus. The borrower found no way to extricate himself from the compulsions of credit. This was all the more true in a situation where the quantity of rice the peasant possessed annually was not enough for him to subsist between harvests without contracting any fresh loan. The deficit (in terms of excess of consumption over production) in a given year could not be narrowed down, if he failed to generate any surplus from the previous year's production or if the previous year's surplus fell short of the difference between the available balance of rice and his minimum subsistence requirements in the current year. Even in times of good harvests the peasant had to surrender his surplus to meet his debt obligations accumulated over years. His income from non-foodgrain cultivation was often too small

to buy rice and meet the deficit specially when he was basically a paddy-grower. He was, therefore, trapped in an ongoing process of borrowing and left in the lurch. Even in times of good harvest the peasant had to surrender his surplus to meet his debt obligations accumulated over years. His income from non-foodgrain cultivation was often too small to meet his needs. The borrower

A typical peasant usually entered into loan contracts to meet his deficit in terms of rice balance. The extent of deficit may be expected to fluctuate inversely with the fluctuations in household production. But no time series for household production for different classes of the peasant producers can be constructed from the available data for acreage and output. The district SSRs and the LRC provide data for size-distribution of holdings, but the latter source furnishes no data for the area and number of holdings for less than 1 acre size-class. In view of this, we can choose the time series in the fluctuations of PCRFP as a proxy for the time series of the fluctuations in household production of the peasants contracting usurious loans. This does not betray the realities of a peasant economy where the fluctuations in PCRFP were caused primarily by the fluctuations in rainfall and the small units of production were exposed more to the fluctuations in the latter than big units.

But fluctuations in output alone do not explain the deficit household's debt behaviour. As we have already observed, the deficit household might have to part with its produce even in times of good harvest and buy rice specially during the preharvest season. The debt behaviour should, therefore, be explained in terms of the fluctuations in PCRFP as well as in terms of the fluctuations in preharvest price

of rice (PHPR) of the cheapest variety. The borrowers contracted most of their loans ~~contracts~~ in the preharvest season, because their deficit in terms of paddy balance, as it is suggested above, would be at its maximum in the immediate preharvest ~~x~~ season and, consequently, their demand for credit would also be the largest during the lean season. In choosing the preharvest price of rice of the cheapest variety as an explanatory variable, it is supposed that the borrowers of small means would prefer that particular variety of rice the price of which would be the lowest compared to that of all other varieties of the relevant product. The lenders, on the otherhand, would try to maximise their supply of credit, because they would gain more in lending at the high-price-season and recovering loans at harvest seasons when the price usually reaches its **trough**. Seasonal price fluctuations in backward agriculture, as Bhaduri observes, 'almost invariably work to the disadvantage of the peasant and to the advantage of the lender. [I984, P.207 This is particularly true when the current market prices are used to reckon the peasant's outstanding debt and fix repayment in kind.

Mortgages (in terms of number of deeds) have, therefore, been regressed on PCRCP and PHPR as well and the results obtained therefrom are presented in Table 3. The regression equation is : $Y_t = \alpha + \beta_1 X_{1t} + \beta_2 X_{2t} + U_t$

An inverse relationship between mortgages (Y_t) and PCRCP (X_{2t}) has been observed in 10 out of 12 reference districts. (In the remaining two districts, viz, Hooghly and Howrah the association is positive but insignificant). Out of these 10 districts, the β_1 is significant at ≤ 1 per cent level in 4 districts, viz., Burdwan, Birbhum, Murshidabad and Malda, and at ≤ 5 per cent level in 2 districts

Table 3

Linear Regression Analysis of Determinants of
Mortgage (1901-29)

Dependent Variable : Mortgage (Number of deeds) of Immovable Property (Y_t).

Explanatory Variables : Pre-harvest Price of Rice (X_1).
Per Capita Rice Production (X_2)

District	Intercept	Explanatory Variables		R^2	D.W. Statistic
		X_1	X_2		
Burdwan	22784.068	493.235 (1.063)	-17.433 (-3.639)*	0.588	1.806
Birbhum	12886.134	779.915 (1.568)***	- 8.402 (- 2.258)**	0.543	1.332
Bankura	13797.310	3.480 (0.078)	- 6.420 (- 1.457)**	0.279	1.363
Midnapore	10790.225	233.612 (1.871)**	4.056 (0-569)	0.178	1.041
Hooghly	8774.658	280.196 (1.096)	-11.241 (- 1.774)**	0.323	0.854
Howrah	43373.869	5234.215 (5.212)*	-48.755 (- 1.218)	0.606	1.458
24-Parganas	18376.642	2576.603 (2.425)**	(-14.870) (-0.903)	0.515	1.967
Nadia	50428.951	3351.951 (2.974)*	-19.061 (-1.395)	0.341	1.086
Murshidabad	14946.527	530.608 (1.238)	-26.757 (-3.211)*	0.574	0.900
Dinajpur	9714.260	1858.123 (3.417)*	-1.433 (-1.060)	0.569	0.483
Jalpaiguri	-2404.428	5196.753 (3.411)*	14.482 (1.429)	0.461	0.700
Malda	80997.954	1736.176 (1.176)	-29.323 (-3.208)*	0.588	1.301

Sources: GOB: Statistical Returns (Annual/Triennial), 1901-29 Registration Department. GOB: Season and Crop Reports

GOB: Supplement to the Calcutta Gazettee

*Significant at 1 percent level.
**Significant at 5 percent level.
***Significant at 10 percent level.

viz., Bankura and Hooghly. In all the 6 districts where inverse relation between Y_t and X_{2t} is significant, the play of PHPR (X_{it}) as an explanatory variable is insignificant, although it is positively related to Y_t in case of all the reference districts. On the other hand, in case of the remaining districts of Midnapore, Howrah, 24-Parganas, Nadia, Dinajpur and Jalpaiguri, the association between Y_t and X_{it} is significantly positive. The relevant β_1 value is significant at $\frac{1}{2}$ per cent level in case of the districts of Howrah, Nadia, Dinajpur, Jalpaiguri and at $\frac{1}{5}$ per cent level in case of Midnapore and the 24-Parganas. R^2 value seems to range between 0.515 and 0.606 in case of 7 districts and between 0.279 and 0.461 in case of 4 districts. It is, however, as low as 0.178 in case of one district.

The periods chosen for the study for the reference districts of Western and Central Bengal has been 1909-29 whereas for the northern Bengal districts 1913-29. For the former group of districts the retail price data for the cheapest rice are available from 1909 and for the latter group of districts they are available from 1913. The choice of the terminal year was prompted by the consideration that loans against mortgages declined rapidly in the countryside from the beginning of the 'thirties.

In our estimates, no lag has been assumed between the dependent variable and the explanatory variables. Mortgages for such calender year, say 1909, has been related to PCRP of each agricultural year, say 1909, which spans the months from July to June. The harvest months were generally November through January for Winter rice and August and September for autumn rice. The harvests for both the crops, however, used to vary from district to district

and in some cases from sub-division to sub-division within a district. These variations were nevertheless marginal. Furthermore, PHPR refers to the prices prevailing during the months of June, July and August. Since the deficit households are assumed to contract a major part of their loans during the lean season, the mortgages of each calendar year have been related to the prices of the pre-harvest months viz. June, July and August of the same year. Borrowings were, presumably, made for subsistence and the demand for loan was immediate. (This is, however, implied in our assumption that loans were mostly contracted during the preharvest months.) PHPR is, therefore, taken to be an unlagged explanatory variable.

There is, however, one difficulty in selecting the prices of preharvest months the way we have done in case of autumn rice. The harvests of autumn rice used to begin from August and in a few districts or subdivisions from July. But the crop was not marketed before September. This is largely indicated by the data for the price which generally reached its crest during July and August. Moreover, the autumn rice crops constituted a very minor part of the total output of rice in all the reference districts, excepting Nadia. The harvests of autumn rice are, therefore, supposed to have little impacts on movements of the price of rice. The downturn in the price movement, as the relevant figures indicate, is generally found after the harvests of winter rice.

As we have already seen, in some districts the relation between mortgages and the PHPR was more or less indifferent. It may, therefore, be argued that in these districts the peasant's borrowing was not governed by his consumption need for rice. But for the same districts the response of mortgages to PCRCP has been found to be significantly negative. The latter finding goes in favour of the hypothesis of preponderance of consumption loan in those districts too. A decline in PCRCP would raise the peasant's borrowing for rice consumption and, conversely, its rise would reduce his loan demand. The fluctuations in PCRCP might not always express itself out in the seasonal price fluctuations. Fluctuations in trade in rice were likely to affect the availability of the product and its price. Moreover, the agriculturist traders-cum-creditors could manipulate the price through their different layers of control over the product and the factor market. The statistical findings, summarised in Table 3, also suggest that the movements in the PHPR were independent of the movements of PCRCP.

The two explanatory variables are found to be uncorrelated to each other in our regression analysis. It, however, remains an unresolved issue as to why the relevant price fails to work itself out as an explanatory variable in the case of a number of districts. A further probe into the matter is necessary.

We do not always expect peasant indebtedness to be affected by PHPR. The variations at the time of harvest caused by irregular monsoon in some years might be too large to affect the pattern of seasonal fluctuations in the price. To identify PHPR on the basis of an assumed fixed time harvest

is quite difficult. Extraneous factors like the changes in the pattern and volume of trade of the district with the other regions could affect the seasonality in price fluctuations.

District to district variations in the response of mortgages to PHPR may also be explained in terms of the variations in the degree of monetization of the rice market. It has already been mentioned that transactions in paddy largely replaced cash exchange for rice in the local market in the 'thirties. The system of exchange in kind was also in vogue in some regions even before the onset of the depression of the 'thirties'. The SSR, Bankura as we have noted in section I, observed that money as a medium of exchange was almost unknown to an ordinary cultivator. From the available empirical evidence one cannot form any idea about the proportion of transactions in paddy as against cash exchange in the districts. Because of such gaps in essential data, the question as to why peasant indebtedness responded poorly to PHPR in one district and strongly in another seems to be difficult to answer.

III

There was practically no way for the peasant in question to opt out of the process of asset transfer either in the form of mortgages or in the form of outright sale. The deficit household would obviously try to defer sale and secure advances against mortgages of properties. But in case of a substantial decline in the rice equivalent of such advances it would have to sell its assets. It is

to be noted in this connection that the aggregate rice value of loans at any time would be directly proportional to their supply and inversely to the price of rice. Further on, the deficit household's loan demand is supposed to be interest-inelastic since borrowings were made for subsistence.⁶ It was, however, inversely proportional to the margin requirements of loans. This is all the more true for a household having severe constraints of assets to offer as collateral. In any case, a decline in the rice equivalent of loans, if it was not marginal, would induce the deficit household to opt for sales of assets. Such sales of assets were not presumably directly related to the conditions of loans contracted earlier.

An attempt has, therefore, been made to correlate the annual fluctuations in the time series of the sales (number of deeds) of immovable property to the annual fluctuations in the time series of the aggregate value of mortgages deflated by the annual average of the current price of common rice. The results are shown in Table 4. The Correlation analysis (Table 4.) suggests that S_A (number of deeds of sales of immovable property) is inversely related to R_M (deflated value of mortgages) in all the districts of Burdwan, Birbhum, Bankura, Nadia, Murshidabad, and Hooghly during the period 1901-41 and in Jalpaiguri during 1912-41. The relevant T statistics indicate that r values are significant at 1 per cent level for the districts of Burdwan, Bankura, Nadia and Midnapore. The significance of r values varies between 1 and 5 per cent levels in case of the districts of Birbhum and Murshidabad and between 5 and 10 per cent levels in case of Hooghly and Jalpaiguri. For the remaining districts of Howrah, Dinajpur and Malda no significant associations between the variables has been found.

Table 4

Correlation Analysis : Sale (No. of Deeds) and Mortgages (value deflated by the Retail Price of Rice) of Immovable Property.

Districts	Periods	r	T
Burdwan	I (1901-41)	0.545	- 4.055 *
	II (1901-29)	0.462	- 2.708 *
	III (1930-41)	0.794	- 4.135 *
Birbhum	I (1901-41)	0.349	- 2.299 **
	II (1901-29)	0.200	- 1.041
	III (1930-41)	0.852	- 5.138 *
Bankura	I (1901-41)	0.624	- 4.922 *
	II (1901-29)	0.491	- 2.872 *
	III (1930-41)	0.959	-10.655 *
Midnapore	I (1901-41)	0.426	- 2.902 *
	II (1901-29)	0.165	- 0.855
	III (1930-41)	0.919	- 7.000 *
Hooghly	I (1901-41)	0.271	- 1.735 ***
	II (1901-29)	0.302	1.616
	III (1930-41)	0.833	- 4.754 *
Howrah	I (1901-41)	0.116	- 0.709
	II (1901-29)	0.633	4.088 *
	III (1930-41)	0.930	- 7.972 *
24-Parganas	I (1901-41)	0.157	- 0.982
	II (1901-29)	0.274	1.454
	III (1930-41)	0.806	- 4.308*
Nadia	I (1901-41)	0.475	- 3.286 *
	II (1901-29)	0.338	- 1.793 ****
	III (1930-41)	0.746	- 3.544 *
Murshidabad	I (1901-41)	0.356	- 2.351 **
	II (1901-29)	0.030	0.152
	III (1930-41)	0.817	- 4.483 *

Table No. 4 Contd.

Districts	Periods	r	T
Dinajpur	I (1913-41)	0.162	- 0.868
	II (1913-29)	0.093	0.373
	III (1930-41)	0.640	- 2.631 **
Naipalguri	I (1913-41)	0.334	- 1.844 ****
	II (1913-29)	0.030	0.117
	III (1930-41)	0.720	- 3.281 *
Malda	I (1913-41)	0.073	- 0.380
	II (1913-29)	0.431	- 1.850 ****
	III (1930-41)	0.780	- 3.947 *

Sources: GOB : Statistical Returns (Annual/Triennial),
Registration Department, (1901-41).

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(fortnightly issues), 1901-41.

* Significant at $\angle 1$ per cent level, ** Significant at $\angle 5$ per cent level, *** Significant at $\angle 10$ per cent level.

The relationship between S_A and R_M for the period 1901-29 seems to be inverse for the districts of Burdwan, Bankura, Nadia and Malda. The relevant T statistics indicate that the r values are significant and $\angle 1$ and $\angle 5$ per cent levels for Bankura and Burdwan, respectively, and at $\angle 10$ per cent level for Nadia and Malda. For the rest of the districts, with the exception of Howrah, the association between the variables has not been found to be significant.

For the period 1930-41, the association has been found to be significantly negative for all the reference districts. The estimated r values are all significant at $\angle 1$ per cent level excepting for the district of Dinajpur where it is significant at $\angle 5$ per cent level.

IV

The borrowing households could not postpone sales of assets indefinitely and contract fresh loans to service their past debts and meet deficit in terms of paddy balance. M.C. Mc Alpin's Report, the district SSRs and the BBEC's Report (referred to in Section I) provide ample evidence to indicate that a high proportion of loans against mortgages (especially of land) turned bad and ultimately led to transfer of collateral in the lender's favour by court decree.⁷ The time-lag between such mortgages and the sale of assets and the exact percentage of unencumbered assets transferred annually are, however, not known. Deficit households had also to sell many of their unencumbered assets, in years of successive bad harvests, because they could find no other means of servicing past debts or making their ends meet. But the percentage of sales of non-collateral (immovable) assets cannot be ascertained from the available aggregative data on the sales of immovable property furnished by the Registration Department. This apart, a portion of the unencumbered assets does not fall under the category of 'distress sale'. Those sales were made freely and should be viewed as an outcome of normal market activities. Since the sales figures for each of these categories, as referred to above, are not available, it seems to be difficult to estimate accurately the response of outright sales to mortgages of immovable property.

Efforts have, however, been made in this section to correlate the time series of the number of deeds of sales (lagged) of immovable property to the time series of the number of deeds of mortgages of such property. The results are presented in Table 5

Table - 5

Correlation Analysis : Number of deeds of Sales (lagged) and Mortgages of Immovable Property

District	Period	r	T
Burdwan	(1903-29)	0.657	3.890 *
Birbhum	"	0.674	4.078 *
Bankura	"	0.439	2.185 **
Midnapore	"	0.553	2.970 *
Hooghly	"	0.569	3.098 *
Howrah	"	0.362	1.825 **
24-Parganas	"	0.762	5.268 *
Nadia	"	0.733	4.826 *
Murshidabad	"	0.653	3.856 *
Dinajpur	(1912-29)	0.505	1.853 **
Jalpaiguri	"	0.537	2.204 **
Malda	"	0.707	3.160 *

* Significant at ≤ 1 per cent level
 ** Significant at ≤ 5 per cent level

Source : GOB : Statistical Returns (Annual/Triennial), for the period 1903-29 for the Western and Central Bengal districts and 1912-29 for the northern Bengal districts.

In determining the length of lag we have relied on the BPBEC's evidence which indicated that a maximum of 6 years' accumulation of interest against mortgage loans had been enough to cover the value of collateral and to provide a legal basis for claiming the transfer of collateral in the lender's favour.⁸ The maximum lag length has, therefore, been assumed to be of six years. In view of the fact that interest rates varied from district to district and the accumulated interests equalled the value of collateral at varied times we have fitted different lag length for the different districts within the maximum limit of six years. For all the reference districts of western and central Bengal a 5 - year lag has been fitted, whereas a 6 - year lag has been tried in case of the districts of Rajshahi division with the exception of Jalpaiguri where the lag spans 4 years. The correlation co-efficients seem to be significantly positive for all the reference districts. The r values are significant at $\angle 1$ per cent level for all the reference districts excepting the districts of Bankura, Howrah, Dinajpur and Jalpaiguri where they are significant at $\angle 5$ per cent.

Despite all the limitations of data that we have indicated in the introductory paragraph of section IV, it seems to be difficult to resist the conclusion that land transfers, mortgages and indebtedness were all positively related to one another and these relations showed some distressing regularities.

NOTES

1. W.R. Gourlay's note on the rates of interest in the jute district of Mymensingh (claimed to be based on detailed enquiries) gives a detailed account of the plight of the jute growers contracting usurious loans. "Falgun to Bhadro (say April to July) the raiyats enter into contracts which in nine cases out of ten rob them of the whole of the profits from their jute crop. They are improvident to the most incredible extent; no provision is made beforehand to finance the weeding, cutting and preparation of the jute crop, and they are willing to throw away the whole of the profits for the sake of the cash advance at the moment".

Gourlay also drew up a statement of the rates of interest payable in 327 individual cases inquired into. The debt per indebted family (number of such families enquired was 135) was estimated to be Rs.173.70. Of this amount, 55 per cent was found to have borrowed at 37.5 per cent ('or rather 40 per cent when the compounding of interest every six months is taken into account') rate of interest per annum and 17 per cent at rates varying from 42 per cent to 131.5 per cent and the rest at rates below 18 per cent per annum.

Gourlay also observed that the practice of collecting interest in kind paid so much better than interest in cash that the system was widely accepted in the district. This kind of usury was called "dharti system". He narrated how the system was practised in the district : "Under the 'dharti system' the raiyat contracts to pay from half seer to two and half seers per rupee per month. With jute at Rs.8.00 per maund the first of these rates works out to be about 125 per cent per annum and 2½ seer rate works out to 625 per cent. The rates commonly met with are one seer and one and a half seers, corresponding to rates of 250 and 375 per cent per annum". Cf. [Govt. of India : 1908, pp.39-41].

2. See [Sanyal : 1989, Section 17].
3. See [Sanyal : 1984, Section 17].

4. See LRC, Bengal [Vol.II, p.85, Table V, Col.4, p.1067]. It is noted below the table that the estimate of consumption is based on the assumption that everybody gets full meals.
5. Chaudhury has witnessed the same sort of situation in Orissa where the petty peasants borrowed even in years of plentiful harvests. His reference period spans the first three decades of the twentieth century. Cf. Chaudhury [1982, Ch.V, Section III]
6. One may think that this assertion is inconsistent with the theory of consumer behaviour, since the choice between present and future consumption is always responsive to the rate of interest. But in the Stone-Geary utility function the utility is not defined when consumption falls below the subsistence level. Hence the insensitivity of loans for subsistence consumption to changes in the rate of interest cannot be contradicted by the theory of choice between present and future consumption. For further discussions see Layard and Walters [1978, pp.162-63].
7. See [Sanyal : 1989, Section I7].
8. The BPBEC's observation in this connection is quoted below :
"It is true that mortgages may remain outstanding for 12 years, but as soon as 6 years elapse, the personal liability is extinguished. Hence it is usual to take some steps towards realisation before six years are out. Besides this, the accrued interest mounts up at such a rapid rate that the margin between the value of the property and that of the debt becomes narrowed down within six years, requiring some measures on the part of the lender".
See BPBEC [1930, Vol.I, Part II, p.647].

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