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**RURAL INFORMAL CREDIT
INSTITUTION IN SOUTH ASIA :
AN UNRESOLVED AGRARIAN QUESTION**

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DEBDAS BANERJEE



**CENTRE FOR STUDIES IN SOCIAL SCIENCES,
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10, Lake Terrace, Calcutta 700 029

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Abstract

The linear extension of the 'logic' of market operation in the organized sector to the informal sector obfuscates the problem. The phenomena of high (often referred to as usurious) interest rate as well as the significant variation in interest rate and in credit contracts in the same market remain unexplained without the specific configurations of the property rights and the characteristics of the output market.

1. Introduction

In those regions of the world which are yet to industrialize, the agrarian question has remained one of the central and abiding concerns. A central characteristic of economic backwardness is an unresolved agrarian question. It has, of course, different layers of meaning (see, e. g., Byres, 1991) : as a political question regarding the attitude of the peasantry and their role in the transformation of an extant social formation; as the development of capitalism in the countryside, that is class formation in agriculture or the differentiation of the peasantry ; and, as capitalist industrialization, and overall capitalist transformation, that is as a major source of surplus for primitive accumulation. The agrarian question, however, corresponds to the historical formation of property rights of individuals over assets, which would define the mode of exchange of such rights and consequently the functioning of economic organizations, in a non-Walrasian system.

Individual's rights to utilize, obtain income from, and alienate the asset define the property rights. Legal rights, as a rule, enhance economic rights, but the former are neither necessary nor sufficient for the existence of the latter (Barzel, 1989 : chp. 1). New rights are created in response to new

economic forces (Demsetz, 1967). As the value of the lands enhances due to, especially, the increase in productivity economic forces tend to establish rights over it. Conversely, unless the gains from the holding of the property is worthwhile given the costs, the propensity to disown the property would be high, provided the alternative avenues of productive use of the liquidity holdings are wide open to the asset holder. It is in this sense that the regional attributes to the historical processes of agrarian development perhaps depict different modes of exchange—market and non -market—of property rights in different regions. Michie (1978), Sarap (1990), Swaminathan (1991), for instance, have studied the rural informal credit market in different regions in India, respectively, and come up with conflicting conclusions. This pertains perhaps more to the diversity of agrarian development and the corresponding redesigning of property rights rather than to mere differences in sample designs.

The rights to an asset generating a flow of service are relatively easy to ensure when the flow can be readily ascertained (Barzel, 1989 : p.5). A known and constant flow ensure that rights are certain. In other words, the variability and predictability of the *flow* determines the degree to which the rights can be ensured. This has further implications for the exchange of rights. Unlike in the Walrasian general equilibrium framework, a new equilibrium is not instantaneously attained through a costless reallocation. The transaction costs associated with the transfer and capture of property rights vary according as (a) the state, acting upon the social organizations, enacts laws to protect certain category of properties, (b) the historical processes of development of the social organizations vary, and (c) the conditions of production vary.

There are different explanations of the persistence of

informal rural credit market, which can broadly be classified into : (a) the credit rationing in the formal sector leaves a gap to be complemented by the informal sector, (b) it actually reflects symptoms of underdevelopment, and (c) the type of collateral accepted as security by lenders and the purpose underlying demand for credit are the basis for the continuing segmentation of the credit market. Stiglitz (1989) and many others have emphasised the problems of information that manifest themselves in various forms of credit markets. Who are likely to be the defaulters ? Or, how to ensure repayments at stipulated times ? These are some of the considerations that force lenders to solve the problems of selection (screening loan applications) as well as enforcement of contract. This, as suggested by many, induces market interlinkage (land, labour, credit and output) in a way that benefits both the lender and the borrower (see, e.g., Bardhan, 1980; Gangopadhyay, 1994). However, that does not provide us with a clue as to why the different exchange systems coexist. On the other hand, the process of agrarian development lies precisely in the changing nature and content of these contracts which reflect, in turn, the changing conditions and relations of production.

The problem of dealing with non-competitive and non-capitalist situations has been focussed more prominently in Bhaduri's two articles (1973, 1977). Bhaduri (1973) has attempted to explain the lender - borrower interface in the Marxian framework of production relations.¹ Since the persistence of usury (or, in brief, excessively high interest rate) requires that the borrowers are perennially short of their paddy requirements the semi-feudal production relations operate as a barrier to the introduction of improved technology that results in higher per capita output of the small tenants.

This, as suggested by Bhaduri (1977), explains agricultural backwardness in eastern India, particularly in Bihar and West Bengal.

During the last 20 years, however, there have been considerable improvements in agricultural productivity in West Bengal. Yet the 'traditional' credit contracts are extensively practised, standardized, and recognized. This may remind us the broader issues of capitalist industrialization and overall capitalist transformation that interlink the resolution of agrarian questions. To draw upon, colonial Korea, Taiwan, or India had experienced periodical productivity improvements in agriculture but there was not, in any sense, a capitalist agrarian transition inasmuch as there was no capitalist agriculture, no capitalist industrialization, no overall capitalist transformation (see Byres, 1991). There was continuing primitive accumulation, but that was part of either Japanese or British capitalist development.

The main explanations of the formation of high interest rates, in brief, are : (a) the lender's risk (Bottomley, 1963, 1975),² (b) isolation as well as highly personalized nature of the agrarian capital (see, e. g., Bhaduri, 1977), and (c) credit rationing in the economy which fragments the market into formal and informal sectors (see, e. g., Tang, 1995). None of the explanations, however, by itself accounts for the significant variation in interest rate as well as other credit contracts in the same market.

The linear extension of the 'logic' of market operation in the organized sector to the informal sector often obfuscate the problem. In the organized sector, though the degree may vary across development and underdevelopment, the market is relatively indifferent to social relations. This is no longer valid in the informal sector. It would be our endeavour to explain the phenomena of high interest rate as well as the significant

variation in interest rate and in credit contracts in the same market. The purpose of the paper is to show that without the specific configurations of the property rights and the characteristics of the local output markets any analysis of the informal rural credit market remains incomplete. Contrary to the perception that the tools of property rights may be best used to analyze the market economy, where allocation is performed largely if not entirely by prices, these tools seem to have more analytical power to explain resource allocation in non—market settings.

The study is based on a survey carried out in the districts of Cooch Behar, Dinajpur, Malda, Birbhum and Murshidabad covering the prosperity enclave, intermediate region and laggard zones, both in terms of controlled irrigation and productivity in agrarian West Bengal, India. In the laggard zone, we have concentrated more in those households where farm and non-farm activities overlap each other, viz., sericulture (the production of silk). To note, the non-farm activities such as silk yarn reeling and spinning, cotton and silk handloom weaving, and *bidi* —indigenous variety of cigarette—binding, are relatively important. The prime emphasis was on collecting qualitative information through the participatory observation method.³ At a later stage, in order to quantify some of the observations, a stratified sample of villages and households (farm and non-farm) was selected to collect data on a few selected questions. Thus the conclusions are not always confined to the tables presented here. In Section II, the interlinked transactions have been studied. Section III deals with the credit market where the interest rate is explicit. In the concluding section some observations are made to put the analysis in perspective.

II. The institution : the interlinked transactions

There are five kinds of credit agreements : (a) both the borrowing and repayments in cash (in short, C-C), (b) borrowing in cash but repayment in kind (C-K), (c) both the borrowing and repayments in kind (K-K), (d) borrowing in cash but repayment with labour and/or, land (C-L), and (e) borrowing in kind and repayment in cash (K-C). Out of the 136 sample cases studied, it is found that about 60 per cent of the credit agreements were of the C-C type, followed by C-K (28.7 per cent), K-K (6.6 per cent), and C-L (5.15 per cent) (Table 1). We have not separately accounted for the K-C, since it is very widespread in rural economy. On the whole, however, there is significant regional variation, too in credit agreements, as is evident in Table 1.

The regional pattern of variation shows that generally the commercial crop growing regions have developed a rather strong interlinkage between land, labour, credit and output markets. However, only in the two blocks (Nalhati and Rampurhat) in the district of Birbhum, the C-L interlinkage is found to be considerable (Table 1), although the region is not found to have any shortage of agricultural labour. The system of sharecropping though not uncommon in this region is less significant in the overall land-management practice, and the social hegemony of the landowning peasantry is comparatively more developed. The gradual consolidation of the irrigation infrastructure in this district of Birbhum, particularly since the development of the Mayurakshi system of canals during the 1950s, led to the growth of a more intensive form of cultivation and gave rise to a relatively strong and active peasant community (Biswas and Bandyopadhyay, 1978).

Generally, the substantial peasant *cum* lenders rather than

the professional lenders are inclined more towards loan agreements other than C-C type. There are two kinds of loan agreements with land as the collateral. First, is an agreement that allows the borrower to repay after one year against the usufructuary rights on the land. The volume of the credit is determined by the size and productivity of the lands. On an average, one *bigha* (i. e., 0. 33 acre) of land allows the owner a credit of Rs. 2,000, in this type of agreement. The borrower is supposed to perform everything from sowing to harvesting while the lender reaps the entire yields of the land during the year as repayment of the principal *plus* interest. The system is known as *khay khalasi*. Suppose, the mortgaged land has a mulberry plantation. Generally, the yield of leaves on 0.33 acre enables one to rear 200-250 dfls ('disease free laying') of silkworm in a crop season, which turns out 60-70 kilos of cocoons whose market value would be Rs. 3,600-4,200. Giving allowances for crop losses, the lender's gross revenue would be at least Rs. 10,000 out of the four crops, in a year. Of course, the lender incurs the costs of rearing. Still, the cost-return calculations would show (Banerjee, 1990) that the *margin* is considerably higher than the amount the lender would have earned had the money been given at a seven per cent monthly (simple) interest rate,⁴ which is the average rate governing the C-C market.

The other system of using cultivable lands as collateral closely resembles the system of leasing in or out. The loan amount against this kind of collateral varies with the market value of the lands. The lender enjoys the usufructuary rights on the lands so long as the principal remains unpaid. The produce of the land is treated as the interest payments. In this kind of agreement the borrower does not have to render free labour service. Usually, in this system, 0.33 acre of land enables its

owner to have a loan to the tune of Rs. 10,000.⁵ The *implicit* interest rate turns out to be at least seven per cent per month; for commercial crops cultivation it would be more. The divergence of the price factor makes it difficult to calculate the precise rate of interest in these cases.

However, the leasing in appears to be less economic than the khay khalasi for the lender. This has greater implications for productivity improvements in agriculture, in general. The easy opportunity to exploit both labour and land in the system of khay khalasi generally does not induce capital investments in improved cultivation by the risk averse landed gentry *cum* lender. Further, in areas where there is perennial demand for credit from the common peasants, the system of khay khalasi, though it hinders the processes of land transfer and concentration, yet induces immiserization.

While some people keep their lands mortgaged to have loans there are intermediaries who borrow from the lender to buy the usufructuary rights to lands from the actual borrowers. This happens when the lender refuses to accept any collateral other than gold, silver, or utensils, and the borrower could not offer collateral other than lands. The intermediary (usually, a landowning cultivator) because of his greater access to different kinds of collateral borrows funds at a stipulated interest rate from the professional moneylender (or, even from the organized sector banks) and extends the same to the ultimate borrower in exchange of usufructuary rights to his/her cultivable lands for at least a year.

Secondly, the 'kind - kind' type of credit agreement is also quite common. Usually, rice or paddy are given as loan during pre-harvest for a period of two-three months or less than that, and one and a half times of the principal amount, irrespective of the repayment period, are required to be paid after harvest.

This is rather a highly personalized credit market : No collateral is required, but only those who cultivate land are entitled to this kind of credit, usually from the substantial peasants. Not-so-long ago, this was one of the instruments through which land transfers took place at a significant scale from borrowers to the lenders, usually landed gentry, and also the professionals. However, this has transformed into a rather personalized market with the change in the property relations—the way in which land is owned, held and worked. Taking into account the difference between the pre-harvest (i.e., about Rs. 155 per 40 kilos) and post-harvest (Rs. 125) prices, the implicit interest rate turns out to be about 10 per cent per month, for a grain loan for two months. It may be argued that since the amount to be repaid is independent of the length of the repayment period whether this type of credit could be considered as a loan in the formal sense; because the amount of interest paid per unit of time as a fraction of the balance becomes uncertain. But, the net gains from the transfer using of only subsets of the ownership of the commodities' attributes and retaining the rest by the original owner of commodities is not the Marshallian economic rent (as 'producer's surplus'), either. Besides, the default is penalized, at a compound rate of the original agreement.

Thirdly, there is the cash-kind interlinkage in loan agreements. This is mostly been preferred by the local traders, who are known as *mahajans*. For instance, the jute trader extends loan to the jute cultivators on condition that they would sell their output to him, the yarn trader to the rearers or reelers, and likewise the silk goods trader to the weaver, and so on. The implicit rate of interest on credit transactions varies, sometimes distinctly, in each of the cases of product variation as well as their respective predictability—low mean and low

Variance, low mean and high Variance, and high mean with high Variance. However, the lender, generally does not impose any condition on the production-decision of the borrower. This is quite in contrast to what was evident during the colonial and immediate post-colonial period when the borrower's autonomy was severely restricted by this kind of interlinkage (see Banerjee, forthcoming : chp. 1).

The borrowers, of course, are used to sell their outputs to the trader *cum* lender (mahajan) at a price considerably lower than the 'market' price. In areas where a considerable number of producers of a particular crop/product are indebted to the mahajans the post-harvest price level tends to remain depressed in the market. This perhaps explains the results obtained by Palaskas and Harriss-White (1993) on the divergence of price in closely located rural markets. Thus, the more the indebtedness in a particular area more is the isolation of the specific market and the higher is the probability of not getting the right price by the producers, and thereby greater is the profit on alienation by 'buying cheap and selling dear'.

Fourth, the K-C transaction is widespread in local retail trading. The local fertilizer dealer, for instance, enters into transactions-on-credit provided the fertilizer buyer is ready to pay a premium. And this *rate* tends to be almost equal to the prevailing explicit general interest rate per month in the local informal credit market.

III. The institution : the 'market-type' transactions

Unlike others, the C-C appears as a more formal kind of credit agreement. It is in this market that the professional lenders play crucial role. The degree of variation in the explicit rate of interest (a) by occupation of the borrowers, (b) by the purpose of the loan, and (c) by the types of collateral offered as

securities, is evident in Table 2. On the whole, the weighted average rate of interest is found to be more than seven per cent per month. Going by the occupation of the borrowers, it appears that the traders paid the highest interest (9%) while the reelers, as a group, paid the lowest (4%). To note, the daily labourers, the bidi binders, or the fishers get credit at a comparatively lower interest rate; of course, their size of credit is relatively small. Further, although the rate of return in silk cocoon rearing is higher than that in other economic activities considered here, except for trading, the average rate of interest paid by the rearers is relatively high (8.5%). Apparently, the determination of interest rates takes into account the *return* from different kinds of economic activities rather than the usually assumed risk involved in extending credit to different borrowers.

The frequency distribution of the borrowers, according to different rates of interest paid, shows all sorts of variation. The risk and uncertainties in reeling, for instance, are quite high as the rural yarn market is not well formed (Banerjee, 1995b), yet more than half of the reelers were able to secure credit at an average rate of four per cent per month while rest of them paid a higher credit price (Table 2a). For credit taken towards investments in relatively more generalized agricultural commodity production (than sericulture is, at least in West Bengal) the average interest rate is found to be almost equal to that for domestic consumption purposes, and higher than that in sericulture (Table 2b). This deserves attention since adequate rainfall during the last couple of years, the extension of public as well as private irrigation, and the adoption of high-yielding varieties not only have reduced uncertainties but enhanced aggregate agricultural outputs in the state, as well. In contrast, the non-farm products because of their mostly non-generalized

nature are subject to non-market forces at a greater magnitude than the relatively generalized farm commodities are. This weaker bargaining power in the output market affects the 'primitive accumulation' of the non-farm producers, and consequently put them in perennial need of credit. In brief, it seems, 'risk' is a weak explanatory variable of the high interest rate. On the other hand, 'type of collateral' is found to have a good correlation with the interest rate, at the aggregate level (Table 2c). While it is about 10 per cent without any collateral the rate is lowest in the case of gold (in any acceptable form) as the collateral security. However, the ambiguity in the credit market is further evident in the same table: the same individual interest rate may hold good with any kind of collateral or no collateral at all.⁶ There is significant inter-, and intra-zonal variation, also (Table 1).

Hypothetically, risk minimization is a direct function of tangible asset holdings of the borrower, provided asset transfer, is not restricted by certain laws of the country or region (for example, the lands owned by the tribal people are legally not transferable).⁷ However, as is evident, notwithstanding the same creditworthiness the interest rate varies significantly irrespective of the type of collateral offered (Table 4). There is no systematic pattern of association between the size of landholdings and interest rate; the average rate paid by, for instance, the borrowers in the size class of 0.5 - 1.0 acre is about six per cent while that by the borrowers in the class 'above 3.0 acres' is more than 11 per cent per month (Table 4).

As a measure of cross-checking, we try to estimate the following functional relationships, based on the understanding that the volume of loan and interest rate are equilibrium outcome :

$$I = f(L, D, M) \dots\dots\dots (i)$$

$$V = f(L, D, M) \dots\dots\dots (ii)$$

where, I = interest rate (%) per month ; L = size of landholdings; V = volume of loan taken by the household; D = duration of loan (in number of days); and, M = number of male members in the household.

'M' is considered here as the secondary insurance against risk. Of course, there is no gender bias; the consideration that the male labour force are the only tangible source of income of the family is quite strong in the rural society, though there is no firm ground of that as the female participation rate is found to be substantial. Obviously, the gender fragmentation of the credit market would require special attention.

The results of the multiple linear regression exercise (Table 5) show that the equation with 'V' as the dependent variable is statistically significant while that with 'I' does not hold good. Further, apart from the partial correlation coefficient of V (volume of loan) with D (duration), after L and M have been allowed its effect, no other relationships in either of the equations has a statistically significant 't' value. Moreover, the partial correlation coefficients, except $R_{v2.13}$, are hardly any improvement over the simple correlations.

In regression equation (ii), the intercorrelation of L (landholdings) and M (male members) is found to be statistically significant. However, as $R_v^2 > R_{LM}^2$, i. e., by applying Klein's rule, the problem of multicollinearity is not found to be serious.

IV. The perspective

The official credit market is not sealed to many of the borrowers who enter the informal market. They have entitlements to the kinds of collateral demanded by the official market. Yet because of the transactions-costly paper works

required, the time-lag needed between the application and the sanction of the credit, and not to speak of corruption⁸ the borrowers turn to the informal market. The informal market, on the other hand, is also selective as regards the various collaterals as securities. Thus it is not simply the acceptability of the collateral that distinguishes the markets. Moreover, the 'purpose of loan' too, is not a significant criterion of segmentation. It is not very easy to make distinction between consumption loans and loans taken for productive purposes.⁹ A peasant household might have paid the wage-bills to the hired labourers, for certain reasons, in grains, out of the domestic inventory for consumption, thus exhausted it and, in turn, looked forward to a grain loan, or cash loan to buy its own consumption requirements for the rest of the period till harvesting. Further, so far as the determination of interest rate is concerned, calculations based on 'opportunity cost' are valid so long as the mobility of capital in between organized and unorganized markets is a real phenomenon. For the local trader *cum* lender, the opportunity cost of the loanable funds might enter into his/her economic calculations. On the other hand, for a risk-averse widow (one who happens to be a lender also) in an agriculturist household, the calculation can at best be based upon the maximum interest income that she would have earned, for instance, from the local organized sector bank and which hovers around 10-12 per cent per annum on a fixed term deposit for a year.

In addition to the operational disadvantages of the organized lending institutions the 'populist' measures of the government such as, the waiving of all repayment obligations without there being any significant reason like natural calamities, also prompts distortions in the aggregate credit market. The borrowers expect the imminent announcement of such kind of

waiving thereby postponing repayment, while the banks find it risky to sanction additional credit particularly below certain limits that qualified for redemption, last time when it took place. The volume of per capita credit requirement is generally found to be low. Therefore while the banks usually try to shun small lendings the private occasional lenders constitute the alternative market (Table 6). The regions where non-farm activities have acquired relative significance the lenders are found to be more heterogeneous. However, the heterogeneity has not yielded to the law of single price. The professional lender, substantial peasant, or the mahajans assume importance when individual borrowers need larger volumes of credit, or the frequency of borrowing is high. Not all types of collateral are acceptable to the distinctly different lenders in the informal market. Interlinkage is also not a common feature of the rural credit market. The substantial peasant *cum* lender, or the grain-dealer *cum* lender may prefer interlinkage, but the professional lender generally does not want to have land or labour commitments as the collateral, although interlinkage might have yielded higher return to the loanable funds. It is thus very obvious that the rural credit market is not homogeneous as the models based on monopolies would suggest.¹⁰

The professional moneylender generally asks for such types of collateral in which the borrower has complete property rights and which are easily saleable, e.g., gold or silver ornaments, etc., but not lands. For the landed gentry or substantial peasants, on the other hand, the more incomplete the property right is over the collateral the more is the incentive; *khay khalasi* is preferred to leasing-in type. In the former credit agreement, both land and the labour belong to the borrower yet not the output while in the latter the borrower accord only the

usufructuary rights. Further, when the mahajan accepts 'crop in the field' as collateral he in fact accepts incomplete property rights; the volatility of production assigns incompleteness to the land rights in the sense that the owner does not possess the full knowledge of the property which he/she is going to pledge as security.

It is found that the commercial crop (e.g. sericulture) regions have developed a rather strong interlinkage between land, labour, credit and output markets. Although the calculation of the implicit rate of interest in interlinked transactions quite often is tentative one may argue that the *rate* must not be higher than that in C-C transactions, in respective regions. Otherwise, the borrower would not have entered into a more unequal exchange when comparatively better contract is apparently within the reach. However, first, often the borrower is not able to tender acceptable collateral such as gold, or silver to the professional lender, or land, labour, etc., to other groups of lenders. Second, in areas where the mahajans historically dominate the local output markets, the economic calculations of the common borrowers certainly include the fact of market discrimination.¹¹ Therefore, repayment in kind seems to them rather less costly than in cash.¹²

On the whole, the informal rural credit market apparently though seems to be separated into three distinct sub-sectors, viz., 'cash-cash', 'cash-kind' and 'cash-labour', (assuming the 'kind-kind' as a special case), in fact, they are interlinked through the process of interest rate formation, be it implicit or explicit, in each of the sub-sectors.

The interest rate fixed by the rural professional money lender seems to be positively associated with the 'trading margin' in the rural output markets. The rate of return on commercial trading in the rural economy still remains high due

to the weak integration of different output markets (see, e.g., Palaskas and Harriss-White, 1993; Banerjee, 1995a) and provides sufficient basis of the high and differential interest rates. (The credit-output interlinkage (i. e., C-K type) would further explain the segmentation of the rural output market to a great extent. The implicit rate of interest in C-K is determined by the lender's 'power' to depress the post-harvest price; to the extent under-pricing is possible the implicit interest rate goes up. The lender may negotiate at a lower-than C-C rate so as to ensure a steady supply of output. But as the number of borrowers increases the lender would certainly hike the rate.) The transactions costs in C-L being still higher the economic calculations of the lender take into account the *minimum* rate that is available in C-C *plus* a premium.

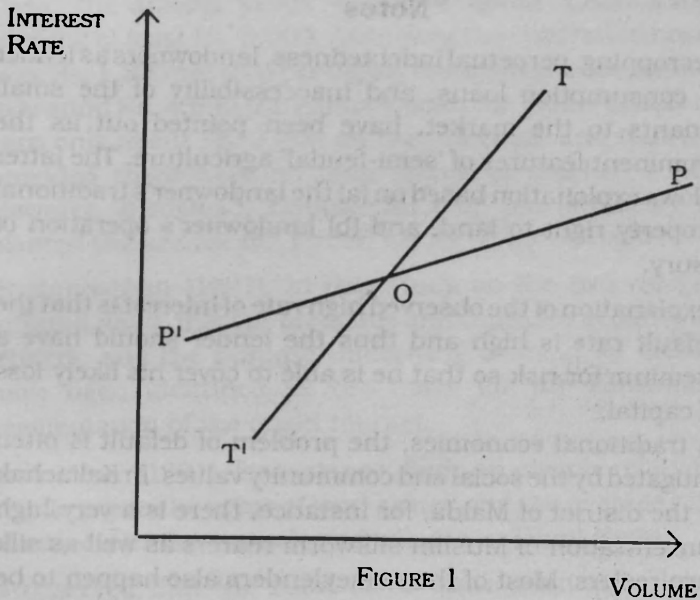


FIGURE 1

In the 'C-C' borrowing and repayments, the supply elasticity of credit is comparatively higher (curve 'P', in Figure 1). On the other hand, in C-K and C-L the supply is constrained by the positive transactions costs of transfer or capture of property rights, be it land, output, or right of ownership on borrower's own labour (curve 'T', in Figure 1).¹³ The intersection of the two curves ('O') is the equilibrium outcome. But the probability of disequilibrium outcomes is likely to be high because of the fact that both the borrower and lender's choices are limited.¹⁴

To conclude, it is the agrarian output market that plays a crucial role in determining the interest rate while the structure and specificities of property rights provide stability to the system. This takes out attention towards the extant complexities of the agrarian market and non-market relations in South Asia.

Notes

¹Sharecropping, perpetual indebtedness, landowners as lender of consumption loans, and inaccessibility of the small tenants to the market, have been pointed out as the prominent features of 'semi-feudal' agriculture. The latter allows exploitation based on (a) the landowner's traditional property right to land, and (b) landowner's operation of usury.

²The explanation of the observed high rate of interest is that the default rate is high and thus the lender should have a premium for risk so that he is able to cover his likely loss of capital.

In traditional economies, the problem of default is often mitigated by the social and community values. In Kaliachak in the district of Malda, for instance, there is a very high concentration of Muslim silkworm rearers as well as silk yarn reeler. Most of the moneylenders also happen to be Muslims. They do not generally demand any collateral as

securities yet the interest rate is comparatively lower. It is the village society which *de facto* acts as the guarantor against any individual defaulter in that society.

- ³ I need not elaborate on the advantages of the method in a poor peasant economy where not only the accounting method is quite poor but also due to widespread illiteracy, answers to the precise questions (almost in a binary mode) are highly unexpected.
- ⁴ A principal of Rs. 2,000 fetches an interest income of Rs. 3,680, in a year.
- ⁵ The total interest burden per annum, at the 7% monthly rate of interest, on a sum of Rs.10,000 turns out to be Rs. 8,400. On the other hand, one *bigha* (=0.33 acre) of irrigated land yields three crops in a year (one *rabi plus* two paddy crops). Suppose, the lender cultivates only paddy. Then, the annual yields would be about 1,800 kilos, fetching at least Rs. 8,000. Assuming the cultivation costs to be Rs. 1,500 per crop per *bigha*, the aggregate costs come to around Rs. 4,500 per annum. Thus the lender is able to earn only about Rs. 3,500 on the principal, and that too provided there were no crop failure or market crash. However, if instead, commercial crop like mulberry is planted the annual net return would be much higher.
- ⁶ *cf.* Swaminathan (1991). In this study on the two villages in Tamil Nadu, the type of collateral accepted as security by lenders, and the purpose underlying demand for credit, have been identified as the basis for the continued segmentation of the credit market.
- ⁷ Swaminathan (1991), for instance, finds an inverse relationship between the value of land owned and the average rate of interest in the two selected villages in Tamil Nadu.
- ⁸ It is observed that the rural elites quite often have been able to bend the government's soft loan schemes meant for

the poor, in their favour. The institutional loanable funds often find its ways to the elites who then utilize the same as their own loanable funds in the informal market. The banks sometimes find it cost-effective as compared to maintaining numerous small accounts.

- ⁹ The borrower in the informal market is not required to state the purpose of the loan. The formal sector is equally indifferent to the utilization of loans unless the loan is specified, as part of any government soft loan scheme, for priority projects.
- ¹⁰ The typical borrower could offer the kind of collateral as securities that are not acceptable in the organized credit market. But since the lenders in the informal credit market accept such collateral they could enforce certain 'monopolistic' contracts like unilateral valuation of the collateral, high (usurious) interest rate, shorter repayment period, etc.
- ¹¹ Apparently, the interlinkages are beneficial to both the borrower and the lender, as argued by Gangopadhyay (1994).
- ¹² In fact, this is how they calculate comparative costs : a rupee equivalent of paddy is considered as less valuable than a rupee, in currency.
- ¹³ For a relatively small amount of individual loan, normally the borrower would not be inclined towards interlinked transactions.
- ¹⁴ In a sense, it may closely resemble to von Stackelberg's duopoly model (1952). The 'P' and 'T' curves may be interpreted as the reaction functions of the two duopolists. Both of them are sophisticated, want to act as leaders and establish social hegemony. But, because of the transactions costs which are not easily negotiable, the disequilibrium is likely to persist despite economic warfare.

Table 1

Regional variation in the types of credit agreement

Block	C - C		C - K N	C - L N	K - K N	Total N
	N	Mean				
<i>Prosperity enclave :</i> Nalhati II	9	5.1111	1	3	-	13
Rampurhat II	2	4.5	8	4	1	15
<i>Intermediate zone :</i> Baharampur	3	8.6667	3	-	-	6
Beldanga	9	6.6667	-	-	-	9
Domkal	10	7.7	2	-	-	12
Khargram	17	7.7059	13	-	6	36
Nabagram	5	15.0	2	-	2	9
Raghunathganj	17	4.0	-	-	-	17
Raninagar	2	4.5	1	-	-	3
<i>Laggard zone :</i> Kaliachak	7	9.5714	9	-	-	16
AGGREGATE	81	7.0123	39	7	9	136

Table 2

The variation in interest rate

(a) by occupation [for, borrowing and repayment in cash]

Occupation	Rate of interest (%) per month						N	Mean	Std dev	Coeff of var (%)
	Upto 4	4 - 8	8 - 12	12 - 15	15 - 30	30 -				
Agriculture	3	11	6	-	1	21	7.5714	5.7756	76.2818	
Bidi binding	-	1	-	-	-	1	5.0	0.0	0.0	
Daily labour	-	3	1	-	-	4	7.0	2.4495	34.9929	
Fishery	1	1	-	-	-	2	4.5	0.7071	15.7133	
Rearing	7	11	11	1	2	32	8.5	6.6235	77.9235	
Keeling	9	8	-	-	-	17	4.0	1.6583	41.4575	
Trading	1	-	-	1	-	2	9.0	8.4853	94.2811	
Weaving	1	1	-	-	-	2	4.5	2.1213	47.1400	
AGGREGATE	22	36	18	2	3	81	7.0123	5.5170	78.6760	

..... Contd.

Table 2 (... Contd.)
(b) by purpose

Purpose	Cases (N)	Mean	Std dev	Coeff of var (%)
Agriculture	13	06.3846	02.5993	40.7120
Consumption	18	06.3889	02.5237	39.5013
Others	11	12.9091	11.4669	88.8280
Sericulture	39	05.8462	03.5655	60.9883
AGGREGATE	81	07.0123	05.5170	78.6760

(c) by types of collateral

Type	Cases (N)	Rate of interest (%) per month				Mean	Std dev	Coeff of var (%)
		Upto 4	4 - 8	8 - 12	12 - 15			
Gold	42	15	24	3	-	04.8571	2.0070	41.3210
No collateral	35	6	10	14	2	09.7429	7.1757	73.6505
Silver	2	-	2	-	-	06.5000	2.1213	32.6354
Utensils	2	-	-	2	-	10.0000	0	0
AGGREGATE	81	21	36	19	2	07.0123	5.5170	78.6760

Table 3
Distribution of interest rate according to landholdings, by economic activities

Land size (acre)	Upto 4	Rate of interest (%) per month				Cases
		4 - 8	8 - 12	12 - 15	30	
		Agriculture				
Upto 0.5	-	1	3	-	-	4
0.5 - 1	1	1	1	-	-	3
1 - 2	-	5	2	-	-	7
2 - 3	2	2	-	-	-	4
above 3	-	2	-	-	1	3
						21
		Rearing				
Landless	2	-	-	-	-	2
Upto 0.5	2	3	9	1	1	16
0.5 - 1	-	5	2	-	-	7
1 - 2	2	-	-	-	1	3
2 - 3	1	2	-	-	-	3
above 3	-	1	-	-	-	1
						32

..... Contd.

Table 3 (.... Contd.)

Land size (acre)	Rate of interest (%) per month						Cases	
	Upto 4	4-8	8-12	12-15	30			
		Reeling						
Landless	5	3	-	-	-	-	8	
Upto 0.5	1	-	-	-	-	-	1	
0.5 - 1	1	2	-	-	-	-	3	
1 - 2	1	2	-	-	-	-	3	
2 - 3	1	1	-	-	-	-	2	
above 3	-	-	-	-	-	-	-	
							17	

Table 4

Size of landholdings and the types of collateral offered against borrowings

Landholdings (in acre)	No Collateral	Gold	Silver	Utensils	No. of cases	Average interest rate (%)	Std dev
Landless	9	5	2	1	17	05.0000	03.5355
Upto 0.5	13	8	-	1	22	09.4091	05.5947
0.5 - 1.0	2	12	-	-	14	06.2857	02.6726
1.0 - 2.0	4	10	-	-	14	07.0714	07.1733
2.0 - 3.0	4	6	-	-	10	04.4000	00.6992
above 3.0	3	1	-	-	4	11.2500	12.5000
AGGREGATE	35	42	2	2	81	07.0123	05.5170

Table 5

Results of multiple regression

(i) Using β - coefficients : $I = 6.9884 + 0.0558 L + 0.1683 D - 0.0984 M$; $n = 81$,
 where, I = Interest rate (%) per month; L = Size of land holdings; V = Volume of loan; D = Duration of loan; and,
 M = Number of male members in the family.

Correlation, covariance, 1 - tailed significance, cross - product :

	I	L	D	M
I	1.000	0.020	0.167	-0.086
L	30.437	18.376	219.656	-0.752
D	0.999	0.429	0.068	0.223
M	2434.988	1470.099	17572.481	-60.148
		1.000	-0.054	0.269
		27147.840	-2117.273	70.590
		2171827.210	0.317	0.007
			-169381.852	5647.185
			1.000	-0.014
			57040.328	-5.290
			0.999	0.451
			4563226.222	-423.222
				1.000
				2.528
				0.999
				202.222

$R_{1,123} = 0.19397$, $F = 1.00346$, $R_{1,23} = 0.05461$, $t = 0.480$
 $R_{2,13} = 0.16888$, $R_{2,12} = 0.09615$, $t = 1.504$
 $R_{3,12} = -0.848$, $t = -0.848$

(ii) Using β - coefficients : $V = 1907.940 + 0.0547L + 0.3409D + 0.1339M$; $n = 81$
Correlation, covariance, 1 - tailed significance, cross-product :

	V	L	D	M
V	1.000 33188506.944	0.072 68774.468	0.336 462373.889	0.144 1317.986
L	0.999 2655080555.556	0.260 5501957.407	0.001 36989911.111	0.100 105438.889
D		1.000 27147.840	-0.054 -2117.273	0.269 70.590
M		0.999 2171827.210	0.317 -169381.852	0.007 5647.185
			1.000 57040.328	-0.014 -5.290
			0.999 4563226.222	0.451 -423.222
				1.000 2.528
				0.999 202.222

$R_{V,123} = 0.37119$, $F = 4.10146^*$
 $R_{V1,23} = 0.05658$, $t = 0.497$
 $R_{V2,13} = 0.34416$, $t = 3.217^*$
 $R_{V3,12} = 0.13755$, $t = 1.219$

Note : * Significant at 1%.

Table 6
Variation in interest rate according to the type of lender

Lender	Cases	Mean	Std dev	Coeff of var (%)
Agriculturist	7	10.0000	3.6056	036.0560
Cocoon trader	4	05.5000	3.1091	056.5290
Doctor	1	03.0000	—	—
Goldsmith	3	10.0000	3.4641	034.6410
Grain dealer	2	05.0000	—	—
Grocer	3	03.6667	3.2146	087.6701
Professional	15	07.0667	6.6490	094.0892
Retailer (dress materials)	3	02.6667	2.5166	094.3713
Teacher	2	10.0000	—	—
Trader	2	08.5000	4.9497	058.2318
Weaver	2	02.0000	2.8284	141.4200
Yarn trader	37	07.2162	6.0834	084.3020
AGGREGATE	81	07.0123	5.5170	078.6760

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