Chapter V

MASTER TRADER SYSTEM, CREDIT TRANSACTIONS AND DETERMINANTS OF INTEREST RATES

In the previous chapter we have discussed that the petty producers attached to the master trader in general produce larger surpluses as compared to the independent petty producers. We ended this discussion by pointing out that the attached petty producers, by virtue of being attached to the master trader, were able to derive certain benefits which the independent petty producers could not. Such benefits may take the form of higher prices for the products, relatively cheaper raw materials, or regular employment. In this chapter we try to understand what are the specialities of the master trader-artisan relationship, and how this relationship facilitates the operations of the artisans.

In the first section, we describe the master trader organisation, its present functioning in different rural industries and its advantages over other types of organisations. In Section II, we would indicate that the attached petty producers regularly receive raw material advances, and some times cash advances to install looms, from the master trader. These credit transactions between the master trader and the artisan are 'interlinked', but the nature of interlinkages is vastly different from what Bhaduri has observed in the case of agriculture. While the former interlinkages benefit the artisan, the latter interlinkages dispossess the peasant. The independent petty producers, on the other hand, are found to depend on the moneylenders in local credit market. It is seen that in the local or informal credit market where these producers operate, interest rates are not only high but they also vary over a wide range. An attempt would be made in Section III to explain such variations, specifically, to identify the important factors responsible in this regard. In Section IV, we try to provide a brief account of the different rates of interest, corresponding amounts borrowed and the interest bills paid by the producers in different rural industries for which the data were collected from field survey. Additionally, we would also discuss how these producers survive in spite of paying high interest rates.

5.1 Organisation of the Master trader system

In the master trader system, the master trader, in the majority of the cases, supplies the working capital and a part of the fixed capital. The artisans supply the rest of the fixed capital and the labour input. The master trader purchases raw materials from the market in accordance with the requirements of the artisans who manufacture the products at their cottages with those materials. The artisans use either family labour or both family and hired labour. The master trader in some cases produces finished goods employing hired labourers in his own work-shed or directly purchases the products from the self-employed artisans.
There may exist intermediaries (sub-contractors) in-between master trader and artisans when the master trader deals with a larger number of artisans. The sub-contractor acts as an agent to mediate between the master trader and artisans. He receives commission which varies across industries, depending on circumstances. Sub-contractors may also supply raw materials and pay wages (i.e. manufacturing charges on piece rate basis) to the artisans on the occasions when the master trader fails to do so.

The master trader system ensures regular supply and quality of manufactured products for the master trader who can then concentrate on marketing these products and buying the raw materials. The artisans are also assured of employment for their family members. Wages (or piece rates) for the artisans are likely to be higher in this system as compared to those in the free market as we shall see later. The master trader can increase the profits through higher frequency of transactions and high rate of turn-over which are facilitated by this system. The system reduces a number of costs for the master trader, e.g., search costs, contracting and enforcement costs, etc. The relationship between the master trader and the artisans in this system is symbiotic, based on mutual trust, faithfulness and self-enforcing agreements which are formed over a long period of transactions. However, the master trader organisation is not a closed system - entry and exit of some artisans are common. It should however be pointed out that there also exist other variations of the master trader system where it can be highly exploitative or where mutual trusts may not be found. In the case of absence of trusts, the artisans are required to deposit caution money with the master trader while receiving raw materials. Under these conditions, the artisans prefer to operate with the master trader rather than operating independently, primarily because of their lack of access to the preferred market for inputs. In the case of highly exploitative system, the master trader charges higher prices for raw materials and pays lower prices for finished products to the artisans as the markets are highly monopolised.

In general production and trading activities based on the above mentioned relations in the master trader system assume a form of quasi-vertical integration of the artisans at the bottom and master trader at the top and the middlemen in-between. We call this quasi-integrated structure as the 'master trader organisation'. The relations among the agents in a master trader organisation are complex and hierarchical. This system differs from the conventional concept of horizontal or vertical merger or collusion. It is not vertical because the artisans do not produce intermediate products and secondly,

1. For different arrangements between the master trader and the artisans, see Annex I in Chapter IV.
2. For a discussion on hierarchic organisations see Herbert Simon (1962).
3. Vertical merger or collusion requires that the output of one firm is the input of the other. See Williamson (1987).
the master traders have no direct control over the physical assets of the artisans. On the other hand, collusion occurs when both the parties do the same activity, here the jobs of the artisans and master trader are different. These master trader organisations and not individual artisans, are found to be competing with each other for determining the price and quantity of the products sold. Competitive power of the organisation in the product market depends considerably on its internal strength, and thus, the nature of exchange relations within an organisation and in a market will be different.

5.1.1 Present Functioning of Master Trader System in Different Artisanal Industries

Some important features of the industries in which the presence of the master traders is significant, are: (i) The output produced in the surveyed regions/clusters in each industry is much more than local requirements and therefore the products are marketed at distant places, sometimes outside West Bengal. Some products, like Murshidabad Silk of Islampur, Baluchari Silk of Bishnupur, Tangayl of Fulia and bidi (of some brands) produced in Aurangabad, cater to national market whereas bandage of Basirhat is exported abroad. (ii) A large part of the raw materials used in these industries is produced outside the State. The high quality cotton and silk yarn, the entire conch shell, tobacco and leaf for bidi, are purchased from outside the State.

The entrepreneurs who establish business in these industries need an elaborate vertical structure of organisation that would coordinate the rhythm of purchasing raw materials, manufacturing products and marketing. This task is not easy for a petty producer to perform. Some artisans have established a long term relationship with the master trader and receive raw materials in time, manufacture products according to the specification of the master trader who have up-to-date knowledge of the market, and then sell the products to the master trader. One advantage of the master trader in these long term relations is that it ensures the manufacturing part (for which no supervision is now required) and thus he can concentrate on the other aspects of the business, like marketing. Master trader generally operates in the urban centres where a steady market exists. Further, simultaneous operation in different markets reduces uncertainty in marketing of products. He could also maintain a large stock of raw materials and finished goods. The attached petty producers are therefore indirectly benefitted, particularly, in terms of assurance of employment, from the above activities of the master trader.

As opposed to this, independent petty producers generally operate in the localised markets in the rural areas where there exist problems of availability of raw materials, and the demand for finished

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4 In the former the contracts are self-enforcing and cooperative whereas in the markets the behaviour of the parties are competitive or may be opportunistic.

5 Conch shell is purchased from Madras, tobacco from Gujarat and Maharashtra, leaf from Madhya Pradesh and Orissa, silk yarn from Bangalore.
products, affecting the prices. In the rural market demand fluctuates seasonally depending on the cycle of agricultural harvest. And the problem gets aggravated if there is harvest failure. As these independent petty producers cannot maintain sufficient stock of raw materials or finished products, they are greatly affected by market fluctuations.

For example, in cotton weaving, the independent petty producers face a supply shortage of good quality yarn, particularly during the peak seasons. In the slack season, on the other hand, they do not find markets for their products. Consequently, the artisans either remain unemployed or are forced to sell their products at low prices. Apart from the above mentioned problems, the independent petty producers have to bear higher prices for the raw materials they use. For instance, raw material cost per piece of cotton cloth for the independent petty producers is found to be 6.4% higher than that for the attached petty producers. Similarly for the latter producers the price is 7.2% higher than that for the former even when the product is the same, as revealed in the course of our field investigation. Some weavers also operate under the master traders, receiving weaving charge per piece and employing hired labour. Obviously what they give to the labourers as piece rate is lower than what they get from the master trader. They appropriate 20% of the payment made by master trader, as commission and rent for the use of their looms by the labourers.

In the case of silk weaving, a similar phenomenon, as observed in cotton weaving, was found. Although silk yarn is produced to a significant extent in West Bengal, it is not easily available in the free market. The yarn market is monopolised by a few merchants. The independent petty producers generally buy the yarn at higher prices as compared to the artisans attached to the master traders. In the case of the former, the material cost of production per piece of cloth is found to be 13.6% higher as compared to the latter. The former also sell their products at a price 14.5% lower as compared to the latter.

We have mentioned earlier that in some variant of the master trader system, there may not exist mutual trusts. Such a system are found in the Islampur cluster. In this cluster, weavers who are

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6 It has been estimated that in 173 the requirement of cotton yarn for handloom sector in West Bengal was 3.9 million kgs. per month while the supply of spinning and cotton mills was 1.39 lakh kgs. per month. In view of this acute shortage, the State Government had to import yarn from the Southern and Western provinces. (GOWB, Directorate of Hand Loom and Textiles, 1973 Paschimbanger Tant Silpa, pp. 7,11a-12c]. The supply shortage has however been continuing till now as reported by the weavers.

7 Silk cocoon is produced in Malda and it is spun in the cocoon growing centres, though on a small scale. The yarn is mostly consumed in the neighbouring district of Murshidabad. High quality silk yarn is also purchased from Bangalore by the weavers producing Baluchari Silk in the Bishnupur cluster.
operating under master trader have to deposit Rs 2000 as dadan\(^8\) (caution deposit) to the master trader for this transaction. The weavers have to part with their produce with the mahajan immediately after weaving in order to secure yarn for the next round of production from the latter\(^9\).

In the case of the bidi industry, raw materials are procured from outside West Bengal through a few merchants and because of this the input market is more imperfect (i.e. with a greater degree of monopoly) than the output market. The non-labour cost per 1000 pieces of bidi is Rs 29 for the independent petty producers and for the attached entrepreneurs it ranges between Rs 17 to Rs 25. Product price for the former is found to be on the higher side. The market price ranges between Rs 40 and Rs 50 depending on quality, terms and conditions of sales and location of marketing\(^10\). On the whole cost advantage of the attached producers seems to be more than the price advantage of the independent producers.

Conch shell is produced in Madras and is sold in Calcutta by the big merchants. At the village level, raw material is supplied by a handful of local traders who have monopolised the local market. The independent petty producers often make retail purchase instead of bulk purchase of raw materials from the Calcutta market. This results in cost disadvantages. Moreover, they sell their products in the local areas through hawkers and get lower prices, whereas the attached producers sell their products in the distant markets, both within and outside the State.

We may highlight the main points of the above discussion as follows: (i) the attached petty producers in general purchase raw materials at cheaper prices as compared to the independent ones; (ii) prices of finished products are found to be higher for the attached petty producers as compared to the independent petty producers, except for the bidi industry for which the prices are higher for the

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\(^8\) Conventionally 'dadan' is meant advances (often in money terms) provided by the mahajans to the poor peasants/artisans for production or consumption purposes at usurious interest rates (sometimes implicit). This method is used to keep the poor perpetually indebted (see Bhaduri, 1973). In this case dadan is meant for caution deposit.

\(^9\) When the master trader gets the weaving done by the artisans on piece rate basis in their cottages the rate is Rs. 110 for silk and Rs. 140 for matka, per piece of cloth weaving. Respective rates for internal contracting are Rs 85 and Rs 110. The attached artisans appropriate the margins as commission and rent for use of loom. The difference in piece rate between silk and matka is due to the variation in labour time required for weaving. Among the different varieties of silk cloth, Baluchari is the best in terms of quality and design. It takes much longer time and more silk to weave a cloth of this variety. Some weavers involved in this activity are found to be members of cooperative. They simultaneously employ household and non-wage non-household labour (dependent on a certain type of contract) and the emolument is shared by all.

\(^10\) Artisans operating under master trader get the rate of Rs 17.42 per 1000 bidis as agreed by the trade unions and bidi merchants association. If there is subcontracting, the subcontractors will retain Rs 1.02 as commission and the ultimate producer will receive Rs 16.40. But to become subcontractor one needs close association with the master trader and should have the capacity to mobilise labour.
independent producers; (iii) in some cases the attached producers receive long term interest free loans for fixed capital and in all the cases raw materials are provided on credit without any collateral, except in the case of silk weaving in Islampur (of which detailed discussion will be made in the next section). At any rate, the advantages which the attached petty producers enjoy over the independent petty producers in the markets for credit, raw material and output, are reflected in terms of the higher value of the surpluses of the attached petty producers over the independent petty producers, as observed in the previous chapter.

5.1.2 Factors Contributing to the Viability of the Master Trader Organisation

The relative viability of the master trader system can be seen as being contributed by the inherent advantages that the system offers both to the master trader and the artisans. Important advantages of the organisation may be described in terms of the following alternative situations:
i) The master trader could have bought directly from the market and sold in other places and earned profits. This would eliminate his dependence on the artisans. But there remains uncertainty in getting the products of the required variety and quality from the market.

ii) The master trader could have set up a big workshed and employed a large number of artisans. But this would need additional cost of land, workshed and centralised supervision or management of labourers. Under the master trader system a master trader can operate with less investment. Investment in fixed capital is shared between the master trader and the artisans. For an artisan no separate workshed is required to house his craft as the artisan's workshed is a part of his dwelling. This implies that, as compared to the Factory System, the master trader organisation economises fixed costs and to an extent variable cost for the same level of production. Therefore, a master trader organisation can produce more and earn more profit from the same amount of capital as compared to a centralised factory, thus making it more cost effective and viable.\(^{11}\)

Further, most of the industries, in which the master trader system is predominant, are highly skill intensive. This skill cannot be easily replaced by ordinary labour or machines. Thus, the master trader intending to set up a big workshed may face the uncertainty of the availability of skilled artisans. The skilled artisan, on the other hand, may be reluctant to work outside his cottage or may charge very high wages because at home they can utilise other family members like children, women and elderly persons for that work.\(^{12}\)

\(^{11}\) The success of an enterprise depends on its ability to formulate suitable action and to develop appropriate organisation in a particular economic environment. See Armen A. Alchian (1950).

\(^{12}\) Moreover, in the pre-capitalist system, workers are generally reluctant to be wage labourer; rather they prefer to be self-employed - master of their own labour. Hill (1969) observed an interesting
iii) One may compare the advantages of an attached artisan as against an independent artisan. The latter borrows capital from the open market at higher interest rate and operates independently. But he has to face uncertainties in getting raw materials and marketing products, as discussed above. The expected income of the attached producer is likely to be greater than that of the independent producer.

(iv) The replacement of traditional looms and products by improved ones and the growth of the latter in cotton weaving of Fulia and silk weaving of Bishnupur have necessitated investment of a large volume of fixed and working capital. Secondly, new markets had to be located for the new products and the sources of some new raw materials had also to be located, particularly where the big merchants hold a dominant position. Substantial investments have also to be made in developing marketing infrastructure. A producer has to face several risks emanating from irregular supply of raw materials and uncertainties involved in the marketing of his products. In addition to this, new looms are installed in the artisans' cottages while raw materials are given to them in the form of advance by the master trader without any written agreement.

As mentioned above, the master trader organisation is based on the mutual trust between the master trader and artisans, and this very personal relation reduces a part of the risks, particularly, the risk of timely production along with maintaining the specified quality. The risk is further reduced through the operation of middlemen, or through the subcontracting system. The influential middlemen not only have close personal contacts with the local artisans but are also able to exercise control over the latter, and, therefore, the artisans can not default in delivering the products.

In brief, the master trader system overcomes a number of problems which include, finding skilled artisans, assurance of quality products and their timely manufacturing and the security of the capital advances. Regular employment of the family members of the artisans has been found to be assured.

5.2. Informal Credit Market

As the production activities of the master trader system take place in cottages of the artisans, part of the investments of the master trader is indirect since it is made in terms of providing credits or

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phenomenon that in Europe, between the 15th and the 18th centuries, wage labour was considered to be the worst form of livelihood. "The relations of employer and wage labour approach ... much nearer to that of master and slave...Many factories look like workhouses for paupers. Self-respecting men fought against going into them, or sending their wives and children into them...Factory discipline must have seemed to the 18th century craftsman equally irrational, equally irrelevant to his interests, equally unfree. He clung on his birth right, his property in his own person and labour. To accept a merely wage status in the factories was a surrender of one's birth right, a loss of independence, security and liberty" (pp.348-51).

13 For instance in the markets for Baluchari and Tangayl saris, finer silk and cotton yarn. We may say that these markets are highly imperfect.

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making advances to the artisans. The nature of these credits is different from that of other informal credits. In this section we have tried to bring out the credit relations of the former system and their differences from other informal markets.

5.2.1. A brief Review of Literature on Informal Credit

Since the early 1970s the informal credit market has been an important area of research. These studies are primarily confined to the credit relations in agriculture. A recent study by Dei Ottati (1994) on the unorganised credit market of industrial districts in Italy has brought out some aspects of interlinked transactions. He observes that in spite of the presence of financial institutions like commercial banks, the informal credit, often linked with other transactions, particularly subcontracting, had been the predominant source of finance and played the vital role in the formation of industrial districts, such as Prato in Italy. At the beginning, “workers, many of whom were weavers, set up a subcontracting system with machinery provided by their former employers. This machinery was then paid for in instalments by discounting the costs from the payment for work ordered by the lenders.”

This kind of interlinked transactions is based on mutual trust and reciprocal co-operation between the parties involved in the transactions. The trust, built through the custom of co-operation and recurrent transactions over a long period among the people in the industrial district, acts as “collective capital” as well as “personal capital” of the people in the sense that “it can generate future yields through transactions which otherwise would never be carried out because they would be considered too risky”, and that “there is less need to resort to costly safeguards and monitoring, which, in the absence of trust, would be necessary to conclude most of the transactions.”

Does this imply that the trust is evenly distributed across the people in the region? Dei Ottati provides an answer in terms of formation of groups, “the development of preferential economic relations, or 'particular markets'... between subjects who make an investment specific to the business relations between them... [and] this saves information costs.” Once such a group is formed, the members would deal as much as possible among them. Interlinked transaction in credit and subcontracting among the members of a group is the outcome of such an effort to take group advantage. Ottati has, however, not explained how such a group is different from the conventional concept of guild, collusion, cartel or merger, nor has he explained the nature of interaction across the

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14 Gabi Dei Ottati (1994).
15 Ibid, p.529.
16 Ibid, pp.532-33.
17 Ibid, p.534
groups.

What Dei Ottati describes as subcontracting and credit linkage is basically a case of alliance of manufacturing and trading. Merchants and small-scale manufacturers/artisans specialised in their respective fields form a nexus and jointly compete with other manufacturers or traders or such groups. Their combined efforts along with maintaining specialisation in respective fields, enable them to extract certain economic advantages over their competitors. The master trader system represents a similar feature involving an association of artisans and the trader. We have already discussed some advantages of such an association or being in an association which exists in some industrial clusters in West Bengal.

Secondly, interlinked transaction which Dei Ottati discusses is associated with economic dynamism of the region and is thus progressive in character. His observation contradicts some other literature on interlinked transactions in under-developed agriculture where it is based on non-cooperation and opportunistic behaviour and acts as hindrance to the development of agriculture18. As Bhaduri (1973) observes, moneylender also combines trading, land-leasing or cultivation, and through interlinked transactions in these markets exploits the borrower-tenants. High interest rates (some times implicit and exceeding 300%) are used as an instrument to put the borrower in a perpetual debt trap which eventually leads to grabbing of assets of the latter through inducing default. As the borrower-tenant is able to retain little investible surplus, and the lender does not wish to improve productivity in agriculture because that would reduce his control over the tenant, agriculture stagnates. There also exist other interpretations of high interest rates in the backward agriculture. For example, Bottomley (1975) observes that high interest rate is an outcome of rational decision making when there exist risks of default. The high rate of interest includes a premium for risks together with the opportunity cost of money19. The higher the risk of default, the higher would be the implicit premium and thus the higher rate of interest. But this cannot explain why the interest rate is so high (36%) when land and movable assets like gold, silver and bell metal are used as collateral, or why the interest rate is very low (even zero) in a situation when the master trader provides loans to artisans to install looms without any collateral20. Moreover, the nature of risk or uncertainty has not been properly analysed, and thus the local informal insurance system is not perceived.


19 Bottomley (1975) actually considered “four components of rural interest rates: (a) opportunity cost of money involved, (b) premium for administering the loan, (c) premium for risk, and (d) monopoly profit” (p.279).

20 We have made these observations in course of our field investigation.
Thirdly, the pattern of interest rate variations in small scale and artisan industries is altogether different from that of agriculture. The interest rate is low (even zero) in case of interlinked transactions and is high (up to 120%) in case of the producers operating independently in the artisanal industries, whereas the reverse is true in the case of agriculture. The nature of the objective functions of the different parties involved in these two types of interlinked transactions (one in agriculture and the other in rural industries) is different and this causes interest rate reversal. While in agriculture, the objective of the moneylender is to exploit the tenant through usury and to grab assets, in the artisan industry the merchant aims at ensuring production with required quality of the products.

It has already been mentioned that artisans are by and large dependent on a system of advances either in cash or in kind or both. Advances are received from the moneylenders or the master traders. It is the independent producer who borrows money from the local moneylenders and the interest rates for these loans often become very high. In the next section we shall analyse the operations of the credit market involving moneylenders and these independent artisans. However, at present we would deal with the effect of advances made by the master trader to the attached producers. Such advances are generally made in kind (e.g., raw materials) and cash (to install loom). The effect of this system of advances will be compared with that in the interlinked markets in agriculture as described by Bhaduri.

5.2.2 Credit Transactions in the Master Trader System and Their Differences from the Interlinked Transactions in Agriculture

The master trader advances raw materials on credit to the artisan. The latter sells his output to the master trader who then debits the balance, i.e., the value of output minus the value of raw materials, on the artisan's account. The cumulative balance is cleared after a week or a fortnight\(^{21}\), for the upkeep of artisan's family. In this arrangement the artisan need not possess working capital of his own to run his production activities. The use of family labour eliminates cash wage payment to the hired labourer. Continuing production on the basis of advances of materials from the master trader, without using own working capital, is observed in bidi industry of Aurangabad, cotton weaving in Fulia and silk weaving in Bishnupur. In the silk weaving in Islampur, silk yarn is provided by the master trader to the weavers against a security deposit.

It is further observed that in some industries like handloom (particularly, for improved Jacquard-type loom) fixed capital is required to a considerable extent. When the artisans fail to provide for this fixed capital, the master trader lends money to the artisans to install looms in their cottages. These

\(^{21}\) For example, in case of bidi it is weekly, and in cotton and silk weaving it is fortnightly, although there is some flexibility in it.
loans were found to be interest free, repayable over a long period. In fact, the master trader recovers the loans by deducting in instalments from the payments for the products sold by the artisans to him. This credit arrangement is observed in cotton weaving in Fulia and silk weaving in Bishnupur. In a sense the above credit transaction (in raw materials as well as in money to install machinery) is interlinked with the transaction in output market. We would see how this differs from the interlinked credit transaction that Bhaduri observed.

Here the master trader lends materials and money (for installing machinery) to the artisans. And the products are manufactured by the artisans with these borrowed means of production. Profits are realised by the master trader after selling the products manufactured by the artisans. The former may consider that the capital he has advanced (in the form of money and raw materials) to the latter is a part of his investments in the business. The return on the capital he would realise from the business. So the question of charging interest on these advances does not arise. As we have already observed, the ability of the master trader to earn profit depends considerably on the smooth functioning of the artisans, i.e., timely delivery of the output and ensuring the desired quality of the products. For the assurance of the latter, the master trader needs to provide all the assistance to the artisans who cannot raise working and/or fixed capital, but have the required skills. Thus, the nature of exchange relations within a master trader system and in a market will be different.

We can now distinguish between Bhaduri's moneylender and a master trader from the point of the objectives and strategies of their operations in terms of inter-linked market deals.

Firstly, the moneylender's objective is to exploit the peasant and eventually grab his assets. By putting the peasant in a debt trap the lender can exploit him in other markets in the form of indentured labour, buying their products at cheaper prices and selling to them at higher prices. High interest rate is therefore instrumental not only in earning interest but also in appropriating assets of the peasant.

For the master trader the objective is to utilise the skills of the artisans and the purpose of lending is to provide necessary infrastructure and materials to the artisans so that the latter can properly use their skills and expertise. The master trader cannot coerce the artisan to this job. Further, the question of interest on these loans also does not arise as loans and advances are given to the artisans for

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Even in the colonial agriculture in India, the method of directly coercing the peasants to cultivate commercial crops by the combined power of merchants and State could not continue for long. Since the peasants were dispossessed in such cultivation, they revolted and opted to switch over staple crops. Merchants, therefore, adopted indirect method of coercing the peasants to cultivate the commercial crops. As Utsa Patnaik (1975) observed, "In the case of Indigo European traders and 'planters' were predominant ... who coerced the reluctants into taking advances for growing indigo by the use of brute forces until the revolt was provoked - the famous Indigo Riots of 1859... Direct coercion could not be a viable method in any long term sense however, where the cultivator was not a slave but nominally at least a free man. The search was then for legal methods of acquiring control over the produce, not only by indigo planters but also by others interested in the trade in cash crops" (p.12).
production which benefits the master trader. At best the master trader can demand some guarantee that
the artisan is using the materials and his skill properly.

Secondly, the moneylender's dealings are confined among the selected peasants in the locality
and almost all his earnings are derived from those dealings. Obviously he would try to make the terms
of exchanges as much favourable to him as possible. And since the interest rate is the main instrument
in this regard, it is likely to be high. Contrarily, an important source of the earnings of the master
trader lies outside the transactions with the artisans, namely, buying raw materials at cheaper prices
from market and selling the products at higher prices in various markets. The master trader would try
to maximise his market realisation by regular supplies of quality products which were manufactured
by the artisans. The master trader would be able to assure himself of regular manufacturing and quality
of products from the artisans through good relations with the artisans, which can not be sustained if
he starts paying lower rates for products to the artisans or charging high interest rates on the loans
advanced. The competitive strength of the master trader system in the market depends in part on the
trader-producers harmony which assures delivery of goods with the required quality.

This however does not imply that the artisans are not exploited or the master trader's profit is
purely based on circulation. An element of exploitation of the artisans can be found. As we have
discussed in Chapter IV, the ex-colonial countries like India are characterised by a vast reserve of
under-employed or unemployed labour force which depressed the wage rates more or less to the
subsistence level. These affects the artisans in terms of lowering manufacturing charges (piece rates).
Similarly when the artisans sell their products to the master traders, the prices (which also include
labour charge) would be lower because of the lower (wage) cost of family labour. We may call these
artisans as self exploiting but from which the master traders benefit. Thus an element of exploitation
can be found in the profits of the master trader which is due to the depressed wage rates in the overall
economy.

Thirdly, the nature of loans are different between the two systems. In the master trader system,
these are production loans and in the other case these are primarily consumption loans. To the
moneylender in the latter case, default is most welcome, it does not involve any risk to him, because
it would help him to grab the assets of the borrower. To the master trader, on the contrary, production
loans involve an element of risk. If the artisan fails to manufacture and deliver the products to the
master trader, the latter would not only lose the money and materials but his business will be
affected\(^23\). The risk is reduced considerably by suitably choosing the artisans. Our field survey reveals

\(^23\) The perception of this risk however varies across industries and depending on circumstances. For
example, the master traders operating with the artisans of Islampur find it risky to advance silk yarn
to the artisans and therefore require caution deposit. The master traders operate from a place away
from the centre of production and have no direct control over the weavers. There is no intermediary
that only those artisans who have been operating with the master for long and proved to be sincere and faithful would gain his confidence with regard to their credit-worthiness. Further, the system also requires that the artisan has to be skilled enough to meet the varied requirements of the master trader.

In a basic sense, it follows, usury capital and merchant capital are different. The former is unproductive and purely exploitative; it has no relation to production activities. Merchant capital, on the other hand, has some bearing on production and to that extent the capital is productive. Here we can consider Marx's scheme of M-M' in case of usury capital and M-C-M' in case of merchant capital. In the former, money or usury capital directly increases from M to M' through addition of interest whereas merchant capital is first used to buy goods (i.e., M-C circuit, money moves from the merchant to actual producers who then can use the money for production purposes) which are then sold at higher prices (i.e., C-M' circuit) to the consumers. Merchant capital, thus enters into production, although indirectly. Moreover, continuation of production by the producers is necessary for the growth of merchant capital, the merchant takes an interest in production.

In the context of Indian agriculture, a clear distinction between usury capital and merchant capital has been made by Utsa Patnaik (1975) with regard to their contribution to productivity of land and labour. She observes that the usury capital was totally parasitic and it had no role in raising the volume of surplus generation. On the contrary, it took away the surplus available with the peasantry and thus ruined the peasant by pushing him below the subsistence level leaving little for reinvestment. Further lending by the usurer might enable the peasant to continue cultivation for some more years but that in no way improved the productivity of land or labour.

In the colonial period in India, there were some phases when commercialisation of agriculture took place under heavy and rigid rental demand and under the indirect (sometimes direct) coercion of the peasants by the merchants who were aided by the State. Most of the cash crops, like indigo, sugarcane, opium, etc. introduced in the Bengal and other provinces required much more capital and operating in this area who could act as agent and reduce the risk.

As Utsa Patnaik (1975) has put it, "In the case of ordinary moneylender's, or usurer's capital, there is no attempt to influence or alter the production process; the usurer's only aim is to appropriate a part of the peasant's already-produced surplus, as interest... It is for this reason - because it implies a progressively increased claim on the peasant's surplus while the level of output remains constant - that usurer's capital plays a purely destructive role, deteriorating the conditions of production of the direct producer and gradually pauperising him" (pp.20-21).


labour per acre than the traditional cereals\textsuperscript{27}. The merchant extracted the major part of the surplus through such means as dadan (cash advances to the peasant) and contract of purchasing the produce at a price stipulated by the merchant while making the advance\textsuperscript{28}. These stipulated prices were generally much lower than those at the time of harvests\textsuperscript{29}. The peasants could not benefit from cultivating such cash crops and, in fact, could have been better off by cultivating traditional cereals, but impositions of revenue demand (in terms of cash) by the State/landlord compelled them to adopt cash crops\textsuperscript{30}. The timing of revenue payment was such that the peasants had no money, which made it possible for the merchant to make advances and ask them to cultivate commercial crops\textsuperscript{31}. The peasants became involved in the process of dadan and cultivating cash crops which were more intensive in capital and labour. Thus, "the merchant's loan performs a qualitatively different function compared to the ordinary usurer's loan. The merchant's advance...results in a physical alteration of the cropping pattern such that output and surplus are raised..." This increase in surplus which is appropriated by the trader can be viewed neither as interest, nor as trading profit; it is in fact profits or return on the capital advanced by the trader in the \textit{production process}. In short, the trader can be viewed as a merchant capitalist to the extent that his capital actually enters and alters the production process itself, raising the value of output.\textsuperscript{32} Merchant capital thus appears progressive to the extent it improved productivity of land and raised surplus, but it in no way improved the conditions of the peasantry.

\textsuperscript{27} Commercial crops were more costly to grow: in general they required irrigation, and even if the capital costs were initially borne by the Government through the construction of irrigation works and canals, the working capital required was considerable for growing such crops as sugarcane, jute, tobacco compared to that for the rainfed staples (ibid, p.14).

\textsuperscript{28} Patnaik remarks, "there is undisputed fact that the majority of the peasantry was on the margin of subsistence after parting with rent or revenue, and not having any investible funds could not afford to shift their cropping pattern towards high value commercial crops without borrowing...the trader timed their advances so that they coincided with the periods of peasants' maximum heed for cash, namely when the rent or revenue fell due" (ibid, pp.14-15).

\textsuperscript{29} Ibid, pp.57-58.

\textsuperscript{30} For the introduction and continuation of cultivation of some cash crops, particularly indigo, extra-economic forces were used on the peasantry.

\textsuperscript{31} A loan from an ordinary moneylender would serve the same function from the peasant's viewpoint; but such a loan carried a heavy interest, whereas the trader's advance was interest-free or carried a low interest, and therefore no doubt more attractive (ibid, p.16).

\textsuperscript{32} Ibid, p.21.
Further, we may make a demarcation of the master trader's capital from the merchant capital. Master trader utilises skills (of the artisans) which cannot be replaced by ordinary labour or machine. Thus, the artisans are not in such a disadvantageous position as the peasants in agriculture. The master trader, also takes interest in promoting skills of the artisans so as to improve the quality of products, and assists the latter through such means as advancing raw materials. Accordingly, the master trader's capital is more productive as compared to merchant capital. The circuit of the master trader's capital may be expressed as M-C-C'-M'-M''. In the first stage, first money capital is spent on purchasing raw materials (M-C) which are advanced to the artisans (or the money capital is advanced to the artisans to purchase raw materials). In the second stage, the artisans manufacture goods with these raw materials (C-C'). In the third stage the artisans transfer the products to the master trader (C-M') where M'>M. Finally the master trader sells these products at the market (M'-M'') with M''>M'. M'' minus M is the value addition and the master trader's surplus is equal to M'' minus M'.

To conclude, credit seems to be an important element in the functioning of the master trader system. Master trader advances raw materials and grants loans to the artisans (without charging any interest) so that the artisans can smoothly carry on their production activities. And the master trader realises the return on the capital through marketing the products manufactured by the artisans. While advancing either raw materials or money, the master trader does not perceive much problem regarding risk or uncertainty (barring a few cases). The master trader system overcomes the problem of risk and uncertainty through interlinked transactions and developing long term relations. In the situation outside the master trader system, particularly when the producers operate independently, and borrow from the moneylender, the risk and uncertainty factors become important. The risks and uncertainty factors become significant in determining the interest rate.

5.3 Independent Producers and Credit Transactions: Determinants of Interest Rates

Our field data show that the interest rate for production loans in manufacturing varies over a wide range - from zero to 120%. We have already discussed above the phenomenon of zero interest rate in the interlinked transactions between master trader and artisans. Here we would discuss the other part of the variation of interest rate which is associated with the borrowings of the independent producers. Table 5A shows the interest rates, corresponding sources and uses of loans, and types of assets mortgaged.

The producers are found to have borrowed from different sources e.g., private moneylenders, traders and agencies of the organised sector like, commercial banks, other financial agencies, Government agencies, etc. The objectives of these lending agencies and their perception of risks in lending also differ. It is worth mentioning that the major source of the independent producers,
particularly artisans, is the private moneylender.

Table 5A: Interest Rate, Sources and Use of Loan, Asset Mortgaged

<table>
<thead>
<tr>
<th>Interest Rate (%)</th>
<th>Borrower's Activity (number of borrowers in parentheses)</th>
<th>Range of Borrowing (Rs)</th>
<th>Sources of Loans</th>
<th>Assets Mortgaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>(2) Ivory and Sandal wood Works</td>
<td>700 - 7000</td>
<td>Money-lender</td>
<td>nil</td>
</tr>
<tr>
<td>108</td>
<td>(3) Bidi</td>
<td>800 - 9000</td>
<td>Money-lender</td>
<td>nil</td>
</tr>
<tr>
<td>96</td>
<td>(2) Bidi, Ivory &amp; Sandal wood works</td>
<td>1500 - 2200</td>
<td>Money-lender</td>
<td>Third party guarantee</td>
</tr>
<tr>
<td>72</td>
<td>(2) Cork Products</td>
<td>700 - 800</td>
<td>Money-lender</td>
<td>House site</td>
</tr>
<tr>
<td>60</td>
<td>(3) Cotton Cloth and Bandage Weaving</td>
<td>2000 - 800</td>
<td>Money-lender/trader</td>
<td>Workshed, garden</td>
</tr>
<tr>
<td>48</td>
<td>(2) Cotton and Silk Weaving</td>
<td>6000 - 17000</td>
<td>Trader</td>
<td>Workshed</td>
</tr>
<tr>
<td>36</td>
<td>(8) Bidi, Leafplate, Furniture, Mat, Cork &amp; Cane Products</td>
<td>500 - 32000</td>
<td>Money-lender</td>
<td>Gold, Silver Third party guarantee</td>
</tr>
<tr>
<td>18</td>
<td>(8) Tailoring, Cuppaintings, cane Leaf-plate, Bell metal, Briquette, Tile &amp; Electronics</td>
<td>3000 - 24650</td>
<td>Commercial</td>
<td>Educational certificate Machinery</td>
</tr>
<tr>
<td>15</td>
<td>(3) Bidi, Bandage &amp; Silk Weaving</td>
<td>24000 - 30000</td>
<td>Commercial Banks</td>
<td>Workshed</td>
</tr>
<tr>
<td>12.5</td>
<td>(5) Modern SSIs</td>
<td>2.5 - 12.3 lakh</td>
<td>SFC, Commercial Banks</td>
<td>Educational certificate Machinery</td>
</tr>
<tr>
<td>10</td>
<td>(2) Electronics &amp; Cork Products</td>
<td>1000 - 500000</td>
<td>KVIB, Commercial Bank</td>
<td>Third party Guarantee</td>
</tr>
<tr>
<td>8</td>
<td>(1) Silk Weaving</td>
<td>4000</td>
<td>Cooperative Bank</td>
<td>Membership of Cooperative</td>
</tr>
<tr>
<td>5</td>
<td>(7) Mat, Leather works, Conch Shell Products</td>
<td>1500 - 5000</td>
<td>Govt. Dept</td>
<td>nil</td>
</tr>
</tbody>
</table>

As is shown in the table, the loans contracted are production loans, particularly, for manufacturing. However, the nature of risk varies across manufacturing activities, such as, between
artisanal productions and modern small scale manufacturing, or between silk weaving and ivory works in the artisanal industries. As the nature of risk in these businesses differs, so does the chance of loan recovery.

Collaterals used for these loans include highly liquid and movable assets like gold and silver and non-movable assets like, house-site, garden and workshop. In some cases installed machinery and third party guarantee have been used as collateral. In some other cases no collateral was required.

We have tried below to relate the interest rate with risk and uncertainty, the use of the loan, the source of the loan, the collateral pledged, and the return on capital.

5.3.1 Risk and Uncertainty and Interest Rate

We begin our discussion with certain observations on Table 5A. It is seen that some producers, particularly in ivory and sandal wood works and bidi industry, have borrowed from private moneylenders at very high interest rates ranging from 96% to 120%, without pledging any collateral. We would show here that these high interest rates are due to the risk and uncertainty involved in the business as perceived by the lenders.

For this analysis we make the following assumptions:

1. Loans are solely meant for production purposes (manufacturing).

2. Number of moneylenders is not large (i.e., perfect competition does not exist). A moneylender does not have monopoly in the credit market. (This is different from the assumption in Bhaduri who assumed the existence of monopoly power of the moneylender.)

3. Number of borrowers is large, and each moneylender deals with only a fraction of the total borrowers.

4. The borrower would not default intentionally. The moneylender has some knowledge about the borrowers in different industries.

5. Artisans or small scale entrepreneurs are considered the only borrowers in the credit market. For the entire market, the risk of lending or the probability of default can be measured according to the Law of Large Numbers. For an individual lender the probability of default cannot be measured because of the small size of his sample, and to him it becomes a problem of uncertainty.

6. Risk and uncertainty in lending are primarily related to those in different types of business activities of the borrowers.

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33 According to Feller (1968) the Law of Large Numbers is the following: as \( n \) [number of trials] increases, the probability that the average number of successes deviates from \( p \) [population mean for successes] by more than any pre-assigned small number tends to zero (p.152). See also Ch. X.
We would first consider the risk of lending for the market as a whole and its effects on interest rate. We would then present the problem of uncertainty faced by a lender while dealing with a smaller number of borrowers. It will be shown below that in the latter situation the interest rate would be higher.

Let \( d \) be the probability of default and \( f = 1 - d \) be the probability of loan recovery. Then \( f \) can be expressed as:

\[
f = f(t, A, r_0, r_1), \quad \text{with } f_0, f_1 < 0, f_0, f_1 > 0,
\]

where \( t \) denotes the period of loan and \( A \) denotes the volume of loan, \( r_0 \) represents social conditions - the greater the social cohesiveness, the greater would be the value of \( r_0 \) and \( r_1 \) indicates the lender's assessment of the creditworthiness of the borrower in term of:

(i) solvency condition: whether a producer repaid past debt in case he is engaged in the activity for long; (ii) possibility of making reasonable returns\(^{34}\) depending on the industry concerned in case of setting up new businesses; and (iii) business condition of the borrowers - greater the stability of the business, the lower is the probability of default.

We have tried a particular risk function which has the above general property and would be useful for computational purposes\(^{35}\).

Our functional form is written as

\[
f = r_0 r_1 (1-T/T^2)(1-A/2K)^t
\]

with the following restrictions:

\( t = 1, 2, \ldots T \), where \( T \) is the maximum period for which a loan can be granted, \( 0 < A < K \), \( K \) is the maximum amount that can be lent to a single borrower, \( 0 < r_0 < 1 \), and \( 0 < r_1 < 1 \).

i) We assume that the number of borrowers in the market is large. Due to the law of large numbers the expected recovery from a loan would be the fraction \( f \) of the amount of loan. Let the desired rate of return be \( h \) from the amount of loan \( A \), contracted to be repaid within \( t \) years. To compensate for the loss due to default (as expected) the interest rate charged will be \( r_p \) where \( r_p \) is given by:

\[
A (1+h)^t = A (1+r_p)^t f
\]

Therefore,

\[
(1+h)/(1+r_p)^t = f^{1/t} \quad \quad \cdots \cdots \cdots \cdots \(1\)
\]

Since \( f < 1 \) and \( t \) is finite positive integer \( f^{1/t} < 1 \) and \( r_p \) changes positively with \( t \) and \( A \), and inversely with \( r_0 \) and \( r_1 \). So \( r_p \cdot h \) is the risk premium.

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\(^{34}\) Accurate assessment of the possibility of making profit in the future is a very difficult process, sometimes impossible, even for the producer himself. The lender therefore applies certain rule of thumb such as whether the producer has repaid past debt or whether the risks and uncertainties are greater in the type of production activity in which the producer is engaged as compared to other types of activities. Later we shall give some examples showing higher risks and uncertainties in some activities as compared to some others.

\(^{35}\) There may be many other forms of risk functions which can fulfil these conditions, and may be used.
If $r_0 = 0.95$, $r_1 = 0.94$, $K = 2000$, $t = 2$, $h = 0.18$ then $f = 0.58$ and $r_p - h = 0.375$. This means the market rate of interest is 55.5% which includes a risk premium of 37.5%.

ii) Though total number of loan transactions in the market is sufficiently large, and hence amenable to probability calculation, it may be the case that for an individual lender the number of loan transactions is small for which probability cannot be measured or the probability of default in the entire market cannot be directly applied. The lender may know the measure of the risk either from his past experience or by observing others' cases (or by assessing the risk of lending in the market as a whole), but to him the situation is more a case of uncertainty than pure risk. He may lose the entire advances or recover entirely or somewhere in between out of the limited number and volume of loans. Even his recovery may be delayed for which interest may not be realised. Not only do the borrowers have varied entrepreneurial skills and the chances of achieving success, the extent of risk also varies across industries. For example, the chance of failure within $t$ years of a running enterprise is significantly lower compared to an enterprise which is in the process of being setup. Similarly, we may compare the pattern of risks of an entrepreneur manufacturing towel or mat with that of an entrepreneur manufacturing ivory products, transistor or brick and tile. The period of turnover is very short in the towel and mat industries. They require very small amount of capital to set up or run the businesses. Loss in one period may be recovered in the next period. Their low risk is associated with low profit in each turnover. In case of ivory products, prices fluctuate widely. Additionally, there are enormous hazards in transportation. Loss in one period may put a poor artisan into bankruptcy. In transistor making, the competition from new brand or the changes in taste of the consumer may lead to winding up the enterprise. In brick kiln industry a longer duration of winter rain may cause severe losses. However, minor fluctuations in the fortune of the entrepreneur may temporarily strain his working capital, but they need not affect the lender. The above observations suggest that the chances of a borrower to succeed in his business and thus repay the loan smoothly vary across industries and to some extent the existing state of his enterprise in a particular industry.

The probability of default is very difficult to measure with a reasonable degree of accuracy in case of small sample. Given the demand for particular types of loans, the lender has to accept the uncertainty (as the distribution of default is unknown). In such a situation, the interest rate will be indeterminate - ranging from $h$ (the desired rate of return on his loan capital) to infinity (as this would

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36 For a discussion on the problem of prediction with small sample see Arrow (1963) and Shackle (1955).

37 Estimates on the basis of small sample may be biased and have little predictive power, whereas with a large sample one can measure ex post distribution of default, and project for the future more accurately. See Arrow (1963), p.958.
depend on the lender’s perception of the uncertainty and this is highly subjective). But he cannot leave
the interest rate to be determined by extraneous factors and would fix a proportion, b, of loans for
which he feels that there are chances of recovery (but he cannot identify such loans individually), and
the rest, 1-b, he would set aside as 'potential surprise'. He may attach a subjective probability
distribution of the b proportion of loans through transforming the relevant probability distribution of
the market which is known.

Let the individual lender attach probability distribution function for his loan recovery as
\[ g = f^2 = r_0^2 p^2 (1-t/T)^2(1-A/2K)^2 \]
The lender sets the interest rate \( r_u \) so as to get back A together with a rate of return \( h \). Then
\[ A(1+h) = bA(1+r_u)^2 \]
or
\[ (1+r_u)/(1+h) = b^{1+h}\]
Since \( t \) is finite and positive, \( f^{2h} \) and \( b^{1+h} \) are both >1 and thus \( r_u > h \). The difference \( r_u - h \) can be stated as
premium for risk and uncertainty.

Let \( b = 0.92 \), and the values of other variables be the same as in the previous example. Then the
market rate of interest will be 114%, the premium for risk and uncertainty, \( r_u - h = 95\% \).

From equation (1) and (2),
\[ (1+r_u)/(1+r_p) = b^{1+h} \]
Since \( t \) is positive and finite, \( b^{1+h} \) and \( f^{1+h} \) are both >1 and their product, \( b^{1+h}f^{1+h} \), is also >1. Further, \( r_p > h \) implies
that the right hand side of (3) is greater than one. Therefore, \( (1+r_u)/(1+r_p) > 1 \) or \( r_u > r_p \). We may call \( r_u - r_p \)
as uncertainty premium. In the above case the premium for uncertainty \( r_u - r_p = 58.5\% \).

Interest rate, \( r \), has three components:
(a) \( h \), which is equal to normal return on capital,
(b) \( r_p - h \), which is equal to measurable risk premium, and
(c) \( r_u - r_p \), which is equal to uncertainty premium.

From the previous example, \( h = 18\% \), \( r_p - h = 37.5\% \) and \( r_u - r_p = 58.5\% \).

The above uncertainty premium can be eliminated through insurance. Consider an insurance
company operates in the credit market covering every loan transaction of all the lenders (it has already
been assumed that the number of borrowers is large). The law of large numbers enables the company
to measure the probability distribution for loan recovery and to apply that. The expected recovery of
loans together with interest \(^{39}\) \( (\sum_{t \in T} \sum_{d \in A} p_d A_t (1+r_p)^t) \) will be in accordance with the rate of return,

---


39 By expected value, we mean \( E(x) = \Sigma p_x \).
h, desired by the lender on his loan capital, and thus the amount will be equal to
\[ \sum_{l=1}^{n+1} \sum_{k=1}^{n} k \alpha_i (1 + h)^k, \]
where \( n \alpha_i \) is the frequency of persons borrowed for particular volume and period.

Thus a uniform rate of interest, \( r_p \), can be charged for all types of loans, or discriminating rates of interest (depending on the levels of risks) can be charged, and the lender will realise a rate of return \( h \) on his loan capital. Here \( r_p - h \) would be the risk premium (assuming zero operating cost of the company). Uniform interest rate can be calculated through pooled data and the discriminating rates can be set by estimating the risks for each type of loans, i.e., for particular volume, type of business and period of loan.

It is already stated that if the number of borrowers (for the market as a whole) is small then the estimation of appropriate probability and thus the insurance is not feasible. Similarly, if the number of lenders is few then they will have monopolistic power and may charge higher interest rate over and above the 'normal' rate of return. Still it cannot eliminate risk.

We have tried to explain above the high interest rate phenomenon in terms of risk and uncertainty. It is pertinent to ask why the interest rate does not exceed further, i.e., more than 120% or why the borrowers repay at all when they have nothing to lose. One possible explanation for this lies in the given tradition of the society which does not permit any intentional default on moral grounds. Credit transactions may not be as personalised as Bhaduri (1977) found in case of agriculture. The defaulter, however, faces social pressure for loan repayments and the threat of isolation. Social institutions, therefore, guarantee some degree of security to the lenders, which on the one hand reduces the risks of default and on the other hand sets a ceiling on the rate of interest.

In the absence of proper insurance system, or non-applicability of probability relevant for measuring default, the lender would try to collect detailed information about the borrowers and monitor their activities. Often such information is costly to collect for future dates. The high information costs together with 'bounded rationality' prevent him from collecting detailed information about each and every borrower. To hedge against risk or to reduce uncertainty the lender resorts to various means, such as, tying up loan contract with transactions in other markets, pledging of collateral by borrower as security, third party guarantee or lending to those who are personally known (personalised transactions).

### 5.3.2 Other Factors Affecting Interest Rates

a) Collateral

Important collaterals that have been used for loan transactions include gold, silver and other precious metals, land, buildings or worksheds, and other immovable assets. The loan transactions are
quite easy when the collateral is movable since the asset can be deposited with the lender and the loan can be obtained. In the case of immovable asset, on the other hand, a special deed has to be made and the asset often remains in the possession of the borrower. Interest rate and margin money requirement are found to be the lowest when the collateral is very liquid. In the case of gold mortgage, for example, the interest rate is 3% per month which is compounded after one year, i.e., the annual compound interest rate is 36%. In the case of land or workshed mortgage the interest rate is higher. Some artisans are found to have mortgaged garden, workshed and house sites with the annual interest rates ranging from 48 to 72% which are quite high\(^{40}\). This may be due to the high cost of realising the asset in case of default. For instance, the lender may have to wait for a long time to find a customer for selling the asset at a reasonable price. This high transaction cost acts as premium over the normal rate of interest. Further in case of no formal mortgage, the utilisation of the loans by the borrowers for production purposes instead of consumption provides some degree of insurance. So long as the borrower's business is running, i.e., he is involved in production activities, the repayment is more secured and he will not escape. The lender can find him in a particular place and in a particular activity, and if the borrower fails to repay, the lender can get control over the craft through raising social pressure.

It is also seen that some producers receive loans from institutional agencies like Government, regional rural banks and other commercial banks, Khadi and Village Industries Board and other similar agencies, West Bengal Financial Corporation and Cooperative banks. Nowhere does interest rate exceed 18.5% per annum. This low rate of interest may be interpreted as follows:-

i) The banks often lend capital at under-valued or administered rates\(^{41}\). The RBI and NABARD also refinance the bank advances at subsidised rates for some sponsored programmes or specified lending activities under priority sector lending.

ii) Very large volumes of transactions covering a wide range of activities and extending over a wide region enable the banks to estimate the risk of default accurately and losses in particular types of loans in particular regions may be compensated by profits from others. Mortgaging of assets or third party guarantees are used, even then these borrowers default.

iii) Government sometimes subsidises the interest even the principals (e.g., DRDA Loans), under

\(^{40}\) It is noted in our survey that out of six surveyed entrepreneurs of mat weaving in Basirhat, 24-Parganas, one combines shopkeeping and received loans by mortgaging house site. Two artisans engaged in cork production in Basirhat have mortgaged house site, and a bandage weaver of the same area has mortgaged garden to install a loom. Few weavers of Fulia and Nabadvip have mortgaged house sites-cum-workshed to install looms and raise working capital.

\(^{41}\) Lending by private individuals from own savings and that by a bank from its deposits are entirely different. See Maurice Allais (1987).
various schemes.

vi) Non-banking institutions mentioned above receive grants from Government or get refinanced by RBI/NABARD at nominal rates of interest and thus they can provide finance at low rates of interest.

b) Return on Capital

It is pertinent to ask how the independent small entrepreneurs pay such high interest rates for borrowed capital. Generally the volume of capital is low and the revenues from the enterprises are used not only to pay for interest but also for reinvestment and household consumption. Continuation of production activity and subsistence of family require that the return per unit of capital has to be high. We have observed that the producers manage to generate high return per unit of capital through intensive utilisation of capital - they employ maximum possible labour, mostly from family, and maintain high frequency of transactions in the markets and high rate of turnover of the working capital. Take an example each from the bidi making, ivory and sandal wood works, silk and towel weaving artisans. Respective amount of loans are Rs.100, Rs.7000, Rs.3000, and Rs.350. Value added per unit of working capital are 30%, 60%, 58% and 20% respectively for each transaction. Annual frequencies of turnover of these artisans are 104, 12, 24 and 104 respectively. (We have obtained these figures through field survey). The independent petty producers engaged in towel industry are found to sell their products in the bi-weekly market from which they also purchase raw materials. Their production cycle is completed twice per week. Similarly, the independent artisans of bidi industry also complete their production cycle twice a week, although their purchasing of raw materials and selling product are confined to the local markets. Petty producers in ivory and sandal wood works, however, take a longer time, about a month, to complete the cycle of buying raw materials, art-works and selling products. In silk weaving the artisans are found to complete approximately two cycles in a month. We assume that artisans (i) use own labour and (ii) re-invest 20% of the value added. Annual income (net of consumption) before interest payment is estimated by using the following equation:

\[ Y = A \left[ (1 + (1 - c)v)^n - 1 \right], \]

where A is the amount of loan, v is the value added per unit capital in each turnover, and c is the proportion of value added consumed in each turnover, and n is the frequency of turnover in a year.\(^{42}\)

\(^{42}\) In the previous Chapter we have estimated surplus per enterprise by deducting imputed wages to family labour from the actual value added per annum for all types of producers. The present estimation considers each production cycle. Here we make simplifying assumptions namely, about value added per unit of capital in each turnover, borrowed capital is used as working capital, and after each turnover a fixed proportion of the value added is consumed and the rest is added to working capital which is used in the next production cycle. The working capital is thus compounded several times (by annual frequency of turnover). We get the annual income (net of consumption) by deducting the initial capital (borrowed) from the annual compounded value, i.e., \( Y = A \left[ (1 + (1 - c)v)^n - 1 \right]. \)
Using this equation the annual incomes (net of consumption and before interest payment) per petty producer in bidi making, ivory and sandal wood works, silk and towel weaving are found to be Rs.42736, Rs.20272, Rs.38789 and Rs.20329 respectively. With these earnings the producers are able to repay loans along with interests. However, it is difficult to say whether the high interest rates are charged because of high returns on capital of the artisans or high interest rates lead the artisan to generate high returns per unit of capital. The problems, however, crop up (i) when the volume of operation increases, hired labour has to be employed and also marketing uncertainties increase which raise the period of the cycle and (ii) at the beginning the family consumption may exceed the value added.

Table 5B: Capital borrowed, interest paid and income earned per producer in petty production

<table>
<thead>
<tr>
<th>Industry</th>
<th>Borrowed capital (Rs)</th>
<th>(2) as % of tot. cap.</th>
<th>Int. rate (%)</th>
<th>Instrt paid (Rs)</th>
<th>(5) as % of GVA</th>
<th>Income of producer (Rs)</th>
<th>(7) as % of tot. capital</th>
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</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
<td>(8)</td>
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<tr>
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<td>96.0</td>
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<td>Bandage</td>
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<td>37.0</td>
<td>60.0</td>
<td>1200</td>
<td>11.9</td>
<td>8880</td>
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<td>Cotton</td>
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<td>37.3</td>
<td>60.0</td>
<td>1500</td>
<td>4.3</td>
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<td>33.2</td>
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<td>7.2</td>
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<tr>
<td>Mat</td>
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<td>34.0</td>
<td>89.1</td>
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<td>Cork</td>
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<td>17.5</td>
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<td>10020</td>
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<td>85.3</td>
<td>11.8</td>
<td>990</td>
<td>3.0</td>
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<td>Leather</td>
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<td>18.0</td>
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<td>Tailoring</td>
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<td>4.4</td>
<td>43220</td>
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<td>18</td>
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<td>16232</td>
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### Table 5C: Capital borrowed, interest paid and income earned per producer in medium-sized production

<table>
<thead>
<tr>
<th>Industry</th>
<th>Borrowed capital (Rs)</th>
<th>(2) as % of tot. cap.</th>
<th>Int. rate (%)</th>
<th>Interest paid (Rs)</th>
<th>(5) as % of GVA</th>
<th>Income of producer (Rs)</th>
<th>(7) as % of tot. capital</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Artisan industry</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<td>Bidi</td>
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<td>108</td>
<td>12744</td>
<td>3.1</td>
<td>87056</td>
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</tr>
<tr>
<td>Bandage</td>
<td>30000</td>
<td>26.6</td>
<td>15</td>
<td>4500</td>
<td>2.2</td>
<td>119700</td>
<td>1.10</td>
</tr>
<tr>
<td>Cotton</td>
<td>8000</td>
<td>10.8</td>
<td>60</td>
<td>4800</td>
<td>1.9</td>
<td>129200</td>
<td>1.70</td>
</tr>
<tr>
<td>Silk</td>
<td>5500</td>
<td>16.4</td>
<td>18</td>
<td>990</td>
<td>1.4</td>
<td>70410</td>
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<tr>
<td>Cork</td>
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<td>92.0</td>
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<td>9000</td>
<td>20.0</td>
<td>35340</td>
<td>2.20</td>
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<tr>
<td>Conch product</td>
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<td>18</td>
<td>6210</td>
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<td>127617</td>
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</tr>
<tr>
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<td>3420</td>
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<td>Mixture</td>
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<td>3600</td>
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<td>50400</td>
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</tr>
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<td><strong>Modern industry</strong></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mango product</td>
<td>250000</td>
<td>100.0</td>
<td>12.5</td>
<td>31250</td>
<td>19.0</td>
<td>99818</td>
<td>0.40</td>
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<td>51.1</td>
<td>15</td>
<td>5100</td>
<td>4.9</td>
<td>48200</td>
<td>1.20</td>
</tr>
<tr>
<td>Polythene</td>
<td>600000</td>
<td>85.7</td>
<td>12.5</td>
<td>75000</td>
<td>35.1</td>
<td>83400</td>
<td>0.12</td>
</tr>
<tr>
<td>Leaf plate</td>
<td>22000</td>
<td>71.4</td>
<td>36</td>
<td>7290</td>
<td>12.2</td>
<td>49248</td>
<td>1.60</td>
</tr>
<tr>
<td>Jute board</td>
<td>1232000</td>
<td>69.5</td>
<td>12.5</td>
<td>154000</td>
<td>16.0</td>
<td>422704</td>
<td>0.24</td>
</tr>
<tr>
<td>Electrical goods</td>
<td>500000</td>
<td>94.3</td>
<td>10</td>
<td>50000</td>
<td>17.9</td>
<td>105000</td>
<td>0.20</td>
</tr>
<tr>
<td>Car repair</td>
<td>1102000</td>
<td>68.7</td>
<td>12.5</td>
<td>13775</td>
<td>8.6</td>
<td>102554</td>
<td>0.64</td>
</tr>
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<td>Tyre repair</td>
<td>975000</td>
<td>62.9</td>
<td>12.5</td>
<td>121875</td>
<td>36.7</td>
<td>30235</td>
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<td>Briquette</td>
<td>15000</td>
<td>19.0</td>
<td>18</td>
<td>1700</td>
<td>1.3</td>
<td>64700</td>
<td>0.84</td>
</tr>
</tbody>
</table>

5.4 Estimates of Interest Rate, Interest Payment and Producer's Earnings in Rural Industries

Here we would consider those producers who have borrowed with the condition of repaying with interest at a later date. In other words, those producers who have received interest free loans (as seen in the master trader system) or those who have not borrowed at all (and operate with their own capital) are not dealt with in this discussion. It is found that around 42% of the sample producers have borrowed with the condition of repaying with interest.

The relevant producers are divided into two groups, viz, petty producers and medium-sized producers (defined in the previous chapter). Majority of the petty producers are engaged in artisanal production. Out of 16 industry groups (4-digit) only three belong to modern manufacturing, namely, leaf-plate making, electronic servicing and cup-painting, as shown in Table 5B. The weightage of the
medium-sized producers is more or less equal in both the artisanal and modern manufacturing. Out of 19 industry groups, 9 belong to artisanal production and the rest in modern manufacturing as shown in Table 5C.

A comparison between Table 5B and Table 5C reveals the following:

i) The interest rate variation (range) is greater in artisanal industries than the modern industries (SSIs)\(^43\).

ii) In general, the average interest rate paid by the producers is much higher in the artisanal industries than in SSIs.

iii) There is no marked difference in interest rate between petty producers and medium-sized producers both in case of artisans and in case of SSIs\(^44\).

iv) For the important artisanal industries like, bidi, cotton and silk weaving, the petty producers are found to have borrowed a greater proportion of their total capital as compared to the medium-sized producers. However, for the SSIs a reverse trend is noted in this regard.

v) It is obvious that, the medium-sized producers have borrowed a larger amount (in absolute term) than the petty producers.

vi) Share of interest bill in gross value added (GVA) per annum is generally very low in the artisanal industries. Out of 13 industries in petty production, only in three cases the interest payment exceeds 10% of their respective GVA. Similarly out of 9 industries in medium-sized production, the share exceeds 10% of GVA only in two cases. In the SSIs, the ratio of interest bill to the value added is generally larger than that in the artisanal industries.

vii) Average annual earning of a petty producer\(^45\) (inclusive of implicit wages for own and family labour and profit or loss) in artisanal industries is relatively higher (greater than Rs 25000) in bidi, cotton and silk weaving, bell metal works, ivory and sandal wood works and furniture making, and is very low (below Rs 15000) in bandage, mat, cork and conch shell products (Table 5B).

\(^{43}\) SSIs are those units which are not required to be registered under the Factory Act, 1948. However, by modern small scale industries we mean those SSIs which are based on modern technology and which are mechanised and highly capital intensive.

\(^{44}\) Previously, we have discussed the case of petty producers of the artisanal industries. In the modern small scale industries, petty producers are those who are self-employed or do not employ hired labour.

\(^{45}\) Earlier we have measured surplus by deducting paid out wages to hired labour and imputed wages to family labour from gross value added. Now we measure earning per petty producer = GVA - Paid Out Wages - Interest Paid. This is equal to implicit wages for family labour and gross profit.
viii) We can make a comparison between the artisanal industries and small scale industries and between small and medium-sized producers with respect to the producer's earning per unit capital (fixed and working capital together). The earning per unit of capital is generally larger in the artisanal industries as compared to the SSIs, for both petty and medium-sized producers. As between petty and medium-sized producers, this is generally larger in the former. In important industries like bidi, silk and cotton weaving, the petty producers earn much more per unit of capital than the medium-sized producers. In SSIs also, the petty producers earn substantially larger amount per unit capital than the medium-sized producers. Here we find a phenomenon which is parallel to the size-productivity relation in agriculture.

Thus, high earning (annual) per unit of capital is particularly true for the small producers who have severe shortage of capital. But as the size of capital increases, the producers try to maintain inventory of raw materials and finished products in order to avoid the adverse effect (or to take advantage) of market fluctuations, thus leaving capital idle for some period of time. In this situation the frequency of transaction or the rate of turnover per annum is likely to be less. As a result, the annual earning per unit capital tends to decline in case of medium-sized producers. (Compare last column of Table 5B and 5C). Therefore, the small producers who borrow capital at very high interest rate are capable of repaying loans and surviving through high earning per unit capital.

5.5 Summary

Our investigation revealed that the master trader system operating in some artisanal industries provides several advantages to the master trader and the artisans attached to him. For the master trader it reduces fixed costs and uncertainty in finding skilled labourers in the market. In addition, it also reduces the degree to which supervision of labour is required as in the case of the factory system. Artisans' employment is also assured. It is further observed that the artisans, primarily petty producers, operating with the master trader, generally purchase raw materials at lower prices and sell the finished products at higher prices as compared to the independent producers.

The most important aspect of the master trader system, as we have observed, is the credit transactions. The master trader generally provides raw materials on credit and in a number of cases grants long term interest free loans to the petty producers to install machinery. The loan can be

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46 Earning per unit of capital = (GVA - Paid out Wages - Interest Paid on Borrowed Capital)/ (Fixed + Working Capital).

47 This may be considered as actual rate of return on capital. Here we deduct wage and interest payments from value added.
recovered in instalments from the payments for the products sold to him by the artisans. The master trader considers these loans/advances as part of his business investments, and the return from such investments can be realised in the long run through smooth transactions, assured and quality manufacturing. The artisan, on the other hand, could operate without capital of his own.

There are some exceptions, as seen in the weaving industry in the Islampur region and in conch shell product industry in Bishnupur. In the former, the master trader requires security deposits while providing silk yarn to the weavers. This is due to the absence of trust leading to emergence of risks involved in their transactions. In the latter, the master trader charges high prices for raw materials and pay lower prices for finished products. The master trader can do so by virtue of their high degree of monopoly in the markets for raw material and output.

Excepting the last two cases, what we have observed above is different from the observations that Bhaduri and others have made about the credit system in agriculture. In the master trader system, the relations are symbiotic and thus the smooth functioning of the master trader depends on that of the artisans, and therefore granting interest free loans or supplying raw materials on credit to the artisan by master trader is necessary in this regard. On the other hand, in Bhaduri's case the moneylender exploits the borrower (poor peasant) in multiple exchanges in different markets on a long term basis, and high interest rate is a necessary condition to put the poor peasant in a debt trap. We, however, observe the moneylenders to operate in the independent petty producers system where the institutional lending agencies have entered to a very limited extent. The moneylenders often charge very high interest rates from the artisans or manufacturerers. Unlike moneylenders in agriculture who charge high interest rates to put the peasant perpetually indebted and exploit him in multiple exchanges in the interlinked markets, moneylenders in manufacturing charge high interest rates to compensate for the risks of lending (including business risks of the producers). Moreover, the moneylender operates in a segment of the credit market and thus the risk and uncertainty perceived by him is far greater than the actual risk prevailing in the market as a whole. This has the effect of raising interest rate further. And this also makes part of the difference of interest rates between the private moneylending and organised institutions, like banks who deal with a large number of borrowers and thus can measure the probability of default.

In view of this kind of risk/uncertainty the moneylender often requires the borrower to mortgage assets. When the collateral is highly liquid, like gold, the interest rate is lower (36%) and the margin money is low, whereas in case of immovable assets like land, workshed or house-site, the interest rate is high. One probable reason for the latter is the problem of realisation of the asset in case of default.

In general, the artisans paying higher interest rates as compared to the entrepreneurs in SSIs are also found to earn much more per unit of capital as compared to the latter. Further, the petty producers
generate more income per unit capital in comparison with the medium producers. However, the share of interest bill of the SSIs in their respective value added is found to be much higher as compared to that in the artisan industries. The interest rate for the former is found to be quite low, and they borrow much greater amount. They are also found to operate with a low rate of income per unit capital. It seems technology differences and variations in related market conditions have important implications on the capital intensity, factor productivity and viability of the enterprises.

Finally, we have observed that there are marked variations in credit relations within the artisanal industries. Terms and conditions of loans/advances for the attached producers in the master trader system are much more favourable as compared to those in the independent producers system. These variations can also influence the upgradation of technology in the artisanal industries. In the next chapter we shall discuss how the master trader system facilitates development of technology in some industrial clusters of West Bengal.