

**AGRARIAN BACKWARDNESS AND INTERLOCKING  
OF PRODUCT AND FACTOR MARKETS  
IN AGRICULTURE :  
A STUDY OF COOCH BEHAR DISTRICT  
IN WEST BENGAL**

*Thesis Submitted for the Degree of  
Doctor of Philosophy (Arts)  
in Economics  
Of the  
University of North Bengal*

**North Bengal University  
Library  
Raja Ramchandra**

*By*

***Debabrata Chakrabarti***

*Department of Economics  
St. Joseph's College  
Darjeeling - 734 104  
West Bengal, India*

1998

STOCKTAKING-2011

**SI - VERF**

Ref.

338.095414

C 436a

126689

10 AUG 1999

## Acknowledgements

*This work was formally initiated in 1991 when I was awarded a Junior Research Fellowship in Economics by the University of North Bengal. I am grateful to Dr. Hillol Kr. Chakrabarti, Reader in Economics, North Bengal University, for his guidance and supervision in carrying out the work. My interest in this particular field grew out of my interaction with him.*

*I owe a special debt of gratitude to my teacher, Jeta Sankrityayana, Reader and Head of the Department of Economics, University of North Bengal, for his extensive comments and valuable suggestions on certain issues. His words of encouragement will be preserved in my memory for ever.*

*I would also like to express my gratitude to all my teachers at the Department of Economics, North Bengal University, for their ready assistance at the time of every need. My thanks go to all my departmental colleagues at St. Joseph's College, Darjeeling, for encouraging me in pursuing the work. I must also remember with thanks and love, the goodwill, help and generous support that I received from a number of government departments and also from the sample farmers whom I met in course of my field investigation. I am thankful to DTP Training Centre, N.B.U. and Mam Computer Centre, Siliguri, for rendering computer work. I also appreciate the help provided by the library staff of St. Joseph's College and North Bengal University.*

*My deep sense of gratitude is due to my parents-in-law and to my uncle, Manotosh Chakrabarti, who were continuous sources of inspiration and help to me. Among my friends, I would specifically like to mention Gautam Saha and Kamal Roy for the keen personal interest they took in the work all along as well as their ever present readiness to help in any way possible.*

*I feel paucity of words to acknowledge my debts to my wife, Suman, who has been the main source of inspiration to me. The thesis would not have been completed without her heartfelt cooperation.*

*At last, I offer my whole-hearted gratitude and respects to my parents who would have been glad to see the thesis completed during their lifetime.*

St. Joseph's College  
North Point, Darjeeling  
13th February, 1998

*Debabrata Chakrabarti*

# Contents

	<i>Page</i>
<i>Acknowledgements</i>	<i>ii</i>
<i>List of Tables and Figures</i>	<i>vi-viii</i>
<i>Abbreviations Used in the Thesis</i>	<i>ix</i>
<b>Chapter 1 : The Incidence and Importance of Agrarian Interlinkages</b>	<b>1-21</b>
1.1 The Underlying Issue	1
1.2 Agrarian Backwardness and Interlinkages	1
1.3 Purposes of Investigations	3
1.3.1 The Primary Investigation	3
1.4 A Survey of the Literature	4
1.4.1 Rural-Economic Stagnation	4
1.4.2 Interlinkage : The Theoretical Framework	6
1.4.3 Empirical Investigation	11
1.5 Design of Study	14
1.6 Structure of Investigation	19
<b>Chapter 2 : Economic and The Agrarian Situation of Cooch Behar District</b>	<b>22-41</b>
2.1 General Features	22
2.1.1 Location and Boundary	22
2.1.2 Brief History	22
2.2 Human Resources	23
2.2.1 Population Growth	23
2.2.2 Composition of SC and ST	23
2.2.3 Literacy Level	24
2.2.4 Urbanisation	25
2.2.5 Occupational Pattern	26
2.3 Natural Preconditions	27
2.3.1 River System	27
2.3.2 Pedology and Climate	28
2.3.3 Forest Resources	28
2.3.4 Mineral Resources	28
2.4 Transport and Communication	29
2.5 Industry	30
2.5.1 Consumption of Electricity	32
2.6 Agriculture	32
2.6.1 Agrarian Structure	32
2.6.2 Land-Use Pattern	33
2.6.3 Cropping Pattern	35
2.6.4 Production Trends and Productivity	35
2.6.5 State of Irrigation	36
2.6.6 Fertilizer Consumption	38

2.7	Rural Credit Situation	39
2.8	A Backward District	40
<b>Chapter 3</b>	<b>: Agrarian Interlinkages among Owner Cultivators</b>	<b>42-67</b>
3.1	Introduction	42
3.2	Socio-Economic Status of Pure Owners	42
3.3	Access to Formal and Informal Credit	45
3.4	Typology of Informal Loans	47
3.5	Sources of Informal Loans	48
3.6	Informal Loans and Interlinkages	51
	3.6.1 Types and Extent of Interlinkages	56
3.7	Terms of Borrowing from Informal Sources	58
3.8	Variation in Interest Rates Over Linked and Non-linked Credit Transactions	62
3.9	The Character of Interlinkages among Owner Cultivators	66
<b>Chapter 4</b>	<b>: Agrarian Interlinkages among Tenant Cultivators</b>	<b>68-88</b>
4.1	Issues in Tenancy	68
4.2	Socio-Economic Status	68
4.3	Some Aspects of Tenancy Relations	71
	4.3.1 Recording of Barga Rights	71
	4.3.2 Tenurial Arrangements	73
4.4	Access to Rural Credit Market	75
4.5	Typology of Informal Loans	76
4.6	Sources of Informal Loans	77
4.7	Landlords as a Source of Interlinkage	78
	4.7.1 Tenancy-Credit Linkage	78
	4.7.2 Tenancy-Labour Linkage	79
4.8	Informal Loans and Interlinkages	81
4.9	Types and Extent of Interlinkages	83
4.10	Terms of Borrowing	86
4.11	The Character of Interlinkages among Tenant Cultivators	87
<b>Chapter 5</b>	<b>: Econometric Analysis of Interlinkages among Landless Labourers</b>	<b>89-112</b>
5.1	Introduction	89
5.2	Channels of Creditor-Control	89
5.3	Sample Characteristics	90
	5.3.1 Typology of Agricultural Labourers	92
	5.3.2 Rural Credit and Landless Agricultural Labourers	92
5.4	Borrowing from Larger Cultivators	93
	5.4.1 The Case of Semi-attached Labourers	93
	5.4.2 The Case of Attached Labourers (Farm Servants)	98
	5.4.3 Non-Linked Credit to Casual Labourers	99
5.5	Borrowing from Village Shopkeeper	100

5.6	Graphical Analysis	100
5.7	An Evaluation of Characteristics	101
5.8	A Micro-Study of Intra-Sample Variations in Interest Rates	102
5.9	Analysis of Qualitative Factors : ACOV Dummy Regression Model	107
5.10	Scaling and Relative Importance of Qualitative Factors	109
5.11	Conclusion from the Econometric Study	111
<b>Chapter 6 : Summary, Findings and Suggestions for Rural Credit Reforms</b>		<b>113-130</b>
6.1	The Issues in the Study	113
	6.1.1 Background Characteristics	114
	6.1.2 Analytical Hypothesis	114
6.2	Observations of the Study	116
	6.2.1 The Rural Credit Market	116
	6.2.2 The Interlocking of Transactions	116
	6.2.3 Typology of Linkages	118
	6.2.4 Impact of Linkages	119
	6.2.5 Extended Observations	120
6.3	Regression Analysis	123
6.4	Review of Findings	125
6.5	Suggested Interventions	126
	6.5.1 Entry & Delivery of Formal Credit	127
	6.5.2 The Cooperative Structure	128
6.6	Developing an Agrarian Economy	130
<b><i>Bibliography</i></b>		<b>131-138</b>

## **List of Tables and Figures**

	<i>Page</i>
Table 1.1	Agricultural Area Statistics for Selected Blocks 15
Table 1.2	Irrigation Installations in the Selected Blocks 16
Table 1.3	Agricultural Technology Indicators in the Selected Blocks 16
Table 1.4	Coverage of Selected Blocks by Institutional Credit 16
Table 1.5	Credit Utilisation in Selected Blocks (1986-87) 17
Table 1.6	Classification of Cultivators into Ownership Groups Used by the Study 18
Table 2.1	Variation in Density of Population (1901-1991) 23
Table 2.2	Composition of Scheduled Caste and Scheduled Tribe Population, Cooch Behar District (1961-1991) 24
Table 2.3	Literacy Rates in the District of Cooch Behar (1951-1991) 24
Table 2.4	Literacy Rates in the District of North Bengal (1981) 25
Table 2.5	Growth of Rural and Urban Population in Cooch Behar 25
Table 2.6	Percentage of Urban Population in Different Districts of North Bengal 26
Table 2.7	Distribution of Population according to Different Categories of Workers and Non-Workers in Cooch Behar 27
Table 2.8	Annual Rainfall (in mm.) 28
Table 2.9	Roads Maintained by Different Organisations in Cooch Behar 29
Table 2.10	Number of Small-Scale Industrial Units Registered with the Directorate of Cottage and Small-Scale Industries with Corresponding Employment 31
Table 2.11	Registered Working Factories (excluding Defence Factories) in West Bengal by District 31
Table 2.12	District -wise Consumption of Electricity in West Bengal (1988-89) 32
Table 2.13a	Distribution of Holdings 33
Table 2.13b	Tenancy Arrangement 33
Table 2.14	Land Utilisation Pattern of Cooch Behar District (1990-91) 34
Table 2.15	Cropping Intensity in North Bengal Districts 34
Table 2.16	Area Under Principal Crops in Cooch Behar 35
Table 2.17	Index Numbers of Agricultural Area, Production and Productivity of Land for All Crops in Cooch Behar, Burdwan and West Bengal (Base : 1971-72) 36
Table 2.18	Area Irrigated by Different Sources in the District of Cooch Behar 36
Table 2.19	Distribution of Ground Water Structures and Draft in Cooch Behar, November (1988) 37
Table 2.20	Distribution of Govt. Deep Tube Wells, River Lifting Irrigation and Shallow TubeWells in Cooch Behar, Burdwan, and W.B. (as on 31st March, 1988) 37
Table 2.21	Consumption of Fertilizer in Cooch Behar 38
Table 2.22	Consumption of Fertilizer in North Bengal District and Burdwan (1988-89) 38
Table 2.23	Number of Bank Offices and the Number of Population per Bank in the Districts of Cooch Behar, Burdwan and West Bengal 39
Table 2.24	Distribution of Deposits and Advances of Scheduled Commercial Banks 40
Table 3.1	Size Group Distribution of Ownership Holdings of Pure Owners 43
Table 3.2	Distribution of Pure Owners according to Caste/Community by Size Group of Holding 43

Table 3.3	Distribution of Pure Owners according to Size Group of Holding and Educational Level	44
Table 3.4	Distribution of Sources of Credit by Various Sources of Pure Owner-Cultivators	46
Table 3.5	Type-wise Break-up of Credit from Informal Sources	48
Table 3.6	Source-wise Break-up of Production Loan from Informal Sources	49
Table 3.7	Source-wise Break-up of Consumption Loan from Informal Sources	50
Table 3.8	Interlinkage of Credit and Labour Contracts	52
Table 3.9	Interlinking of Credit and Output Contracts	54
Table 3.10	Types of Credit Interlinkages among various classes of Pure Owner-cultivators	56
Table 3.11	Interlinked Transactions in the Informal Credit Market of the Study Region	57
Table 3.12	Distribution of Interlinked Households according to Purpose of Loan	58
Table 3.13	Modes of Repayment of Production Loan	58
Table 3.14	Modes of Repayment of Consumption Loan	59
Table 3.15	Collateral Requirements in the Informal Credit Market, Cooch Behar (1990-91)	61
Table 3.16	Mean Effective Rates of Interest Paid by Pure Owners on Linked and Non-linked Borrowings in Cooch Behar (1990-91)	65
Table 4.1	Size Group Distribution of Ownership Holdings of Tenants	68
Table 4.2	Size Group Distribution of Operational Holdings of Tenants	69
Table 4.3	Distribution of Tenants according to Caste/Religion by Size-Group of Ownership Holding	70
Table 4.4	Distribution of Tenant Cultivators according to Educational Level by Size-Group of Ownership Holding	71
Table 4.5	Recorded Tenancies in the Study Region Under Operation Barga	73
Table 4.6	Association Between Crop-Shares and Cost-Shares	74
Table 4.7	Distribution of Sources of Credit by Various Classes of Tenant Households	75
Table 4.8	Type-wise Break-up/Credit from Informal Sources	76
Table 4.9	Source-wise Break-up of Production Loan from Informal Sources	77
Table 4.10	Source-wise Break-up of Consumption Loan from Informal Sources	78
Table 4.11	Interlinkage Between Landlease and Labour Contracts	80
Table 4.12	Interlinking of Credit and Labour Contracts	81
Table 4.13	Interlinking of Credit and Output Contracts	83
Table 4.14	Types of Interlinkages among Various Classes of Tenant Cultivators	84
Table 4.15	Extent of Interlinked Transactions among the Tenants	85
Table 4.16	Modes of Repayment of Production Loan	86
Table 4.17	Modes of Repayment of Consumption Loan	86
Table 4.18	Mean Effective Rates of Interest Paid by Tenants on Linked and Non-linked Borrowings	87
Table 5.1	Caste and Community-wise Distribution of Landless Agricultural Labourers	91
Table 5.2	Distribution of Landless Agricultural Labourers According to Levels of Education	91

Table 5.3	Linking of Credit and Labour Contracts : Semi-attached Labourers	94
Table 5.4	Total Length of Assured Employment by Different Categories of Semi-attached Labourers (1990-91)	96
Table 5.5	Economic Status of Semi-attached Labourers	97
Table 5.6	Lean Season Occupation of Semi-attached Labourers	97
Table 5.7	Aspects of Dependence of Farm Servants on Employers	99
Table 5.8	Annual Remuneration of the Farm Servants	99
Table 5.9	The Sample Data Set	103
Table 5.10	OLS Applied for Qualitative Variables : Regeression Results	104
Table 5.11	Results of ACOV Regression	108
Table 5.12	Interest Mark-downs and Scaled Qualitative Variables	110
Figure 1.1	Location Map of the Study Region, Cooch Behar	21
Figure 3.1	Typology of Interlinkages among Owner Cultivators	56
Figure 4.1	Typology of Interlinkages among Tenant Cultivators	84
Figure 5.1	Sources of Informal Loan	100
Figure 5.2	Types of Loanees	100
Figure 5.3	Typology of Labourers	100

### ***Abbreviations Used in the Thesis***

<b>CL</b>	Credit-Labour Linkage
<b>CO</b>	Credit-Output Linkage
<b>CIO</b>	Credit-Input-Output Linkage
<b>TCL</b>	Tenancy-Credit-Labour Linkage
<b>TL</b>	Tenancy-Labour Linkage
<b>IRDP</b>	Integrated Rural Development Programme
<b>RLEGP</b>	Rural Landless Employment Guarantee Programme
<b>NREP</b>	National Rural Employment Programme
<b>JRY</b>	Jawahar Rozyar Yojana
<b>DRDA</b>	District Rural Development Agency
<b>STW</b>	Shallow Tube Well
<b>DTW</b>	Deep Tube Well
<b>RLI</b>	River Lift Installation

## INCIDENCE AND IMPORTANCE OF AGRARIAN INTERLINKAGES

### 1.1 The Underlying Issue

Economic development relates as much to the problem of sustaining equity as to the problem of sustaining economic growth. In the case of a country like India, with five decades of post-independence development experience, the problem has been rendered more acute by the observation of development in pockets without equitable dispersion of gains. Part of this problem can be accounted for by the populousness of the country and the continued importance of agriculture as a mode of cultivation, against a development-planning initiative that has stressed industrialisation with an urban-bias. The parallel expansion in development economics through studies of emerging imbalances and inequalities have highlighted this distortion. As a result, rural development has grown in importance as a sub-discipline within these studies.

The development of the village economy in India is as important as that of the national economy if equity is to be maintained. This is so because poverty in the country is largely a reflection of rural impoverishment. Solutions to this problem are not however easy. The rural economy in India in the face of a very long history of settled cultivation, and divisive institutions like caste, poses certain impediments to development. Such impediments mostly arise from inequalities between rural classes themselves, and impoverishment of villages can result from the dynamics imparted to agrarian relations by development initiatives. A wise policy for economic development will thus give equal credence to both the rural and urban economy, and to agrarian relationships that exist within the *former*.

In qualitative terms the objective of rural development is to increase rural output, employment and incomes. However, the agrarian perspective on these would ask where this gains accrue. Multiplicity of agricultural income that is accompanied by increased concentration of wealth also manifests increased agrarian power. In India's development experience, phenomena such as the growth in numbers of the landless agricultural labourers, and the flight from the villages to the cities because of economic pressures, are all attributable to such factors. Moreover, they have vitiated the quality of development that has been achieved in quantitative terms. It therefore assumes importance to seek agrarian - based solutions to the problems of agrarian backwardness. A rural development approach that is considered by this is able to control both the magnitude and the spread of development, thereby consolidating the economic gains of the country.

### 1.2 Agrarian Backwardness and Interlinkages

The study of rural development in recent years has focussed a lot of attention on the various types of interlinkages that exist between land, labour, credit and output in the rural areas of less developed countries. These interlinked transactions are different from "the systematic interdependence of economic action in competitive general equilibrium theory and are more in the form of package deals with the terms of one transaction contingent upon the terms of another."<sup>1</sup> The usual examples outlined draw upon landlord-tenant relations that intertwine with creditor-borrower relations between the same contracting parties, or labour- hiring contracts that interlock with those on which credit or land is offered, or simultaneous deals in the commodity and credit markets against pre-commitment of future crops. A clear understanding of the nature of these relations is obviously important to any policy for institutional reform.

Two contrasting views are found in the literature concerning rural markets. According to the first, interlinking increases the power of the stronger sections to exploit weaker sections in the village through interpenetration of markets.<sup>2</sup> The second, while rejecting this necessarily exploitative character of interlinkages explains the rationale of their existence in terms of pervasive risks, incomplete markets, information asymmetry and moral hazard problems that are commonly characterised features of rural economies in developing countries.<sup>3</sup>

Investigation of interlinked agrarian markets is important in order to understand the nature of such linked transactions, a task that is being undertaken by the present study. Given the variety of interlinkages evident between land, labour, credit and output markets in a rural economy, we need to know the reason behind the genesis of such institutions and the extent to which exploitation may be present in linked transactions. The primary sources for interlinkage in an agrarian economy is the rural need for credit. A collateral-poor rural household which is unable to raise loan in the formal credit market may also be in a position to negotiate loan (and supplement its meagre income) by future promise of labour supply or standing crop. Interlinked transaction may therefore conceivably be a device for survival on the part of the rural poor. Regional variations in nature and extent of interlinkages also need to be studied for a proper understanding of their association with different levels of agrarian backwardness. Because of their personalized character, the contractual arrangements may differ between social groups. In order to compare these differences, the institution of interlocking has to be separately considered for different groups of rural households covering owner cultivators, tenants and the landless.

Most of the existing studies on interlinkage which are partial in nature consider only two-market interlinkages, such as credit-output, credit-labour and credit-landless markets. Given the interlinked nature of several rural transactions where transaction-terms in more than two markets are simultaneously finalised, these studies show up their inadequacies. Since the imperfections in one or more markets have their repercussions in all others, a comprehensive study on interlinkage should simultaneously cover all agricultural markets, namely, those for land, labour, credit and output. Our study is therefore an attempt to examine comprehensively the phenomenon of interlocking in order to obtain a full picture of these from the perspective of agrarian relations in a backward rural economy.

A few words might be said about the methodology to be adopted for credit market analysis by the present study. Evaluation of the strategy and impact of the interlinkages can be assessed by studying their impact on the interest rates present in the market for rural credit. However, the first problem relates to the measurement of the interest rate itself. Although there is a nominal or *explicit* interest rate stipulated in credit-terms which reflects the observed cost of borrowing, in evaluating the credit-interlinkage an element of hidden or *implicit* costs enters the rural credit transactions. In fact, the impact of unequal exchange is likely to be felt more through the hidden cost of borrowing than through the nominal costs. As such, an *implicit* interest rate has to be introduced into the analysis, which has to be computed on the basis of the effect of credit-terms on future wages of interlinked labour, or the effect of credit-terms on the prices paid against inputs supplied or against future committed sale of output. *A priori*, before entering the actual analysis, implicit interest rates are expected to be positive and therefore to impose additional costs on borrowers, rendering the credit-interlinked terms adverse. All these take place even when the nominal interest rate appears to be low.

Next, for micro-study of credit conditions in the controversial interlinked credit-labour market, the additional concepts of *transaction costs* and *threshold* rates of interest have to be brought into the analysis. Of these, transaction costs are important in a rural situation because of difficulty of access to credit. Potentially therefore they can represent an addition to the cost of borrowing over and above the implicit costs as defined earlier. This leads us therefore to the concept of the *effective* rate of interest on credit-transactions which subsume all such hidden and overt costs.

Thirdly, in micro-level credit market study, another concept that needs to be considered is that of the threshold rate of interest. This concept arises from the fundamental continuity between borrowers and non-borrowers: whereas the non-borrowers pay no interest charges, the borrower, at the entry into the credit market, pays an entry-level (effective) interest rate considerably in excess of zero under normal circumstances. The threshold interest rate may thus be defined as the level of interest payable at this point of entry. The concept is particularly useful in the regression analysis.

With this structure of interest rates and condition, the operation of rural credit market can be evaluated in disaggregated micro-study through *mark-ups/ mark-downs* imposed on threshold interest rates by various influencing factors. Since such factors may be both qualitative and quantitative, a two-step regression analysis is indicated, combining both OLS and dummy regression (ACOV-Technique). This underlying structure and analyses from it provide the core of the present study.

The present study is thus an empirical investigation into interlinked agrarian markets as they operate in our specific study region and is based on a socio-economic survey conducted over 12 villages of the district of Cooch Behar in West Bengal.

### 1.3 Purposes of Investigation

#### *Objectives of Study*

The objective behind the study of interlinkage<sup>s</sup> in an agrarian economy arise<sup>s</sup> in their importance as both phenomena as well as factors in agrarian backwardness. However, this segregation within the economic sector, where they appear, i.e., agriculture, call<sup>s</sup> for a disaggregated approach to the study i.e. a micro-study. Accordingly, the objective<sup>s</sup> set out for the present investigation are laid out below.

Firstly, in following a disaggregated approach we are required to study the nature and extent of interlinkages among the disaggregated classes of rural households, namely, *pure* owner-cultivators, tenants and landless agricultural labourers.

Secondly, it becomes necessary to examine the modus operandi of different types of linked transactions with a view to explore the nature of such transactions. It then becomes necessary for us to examine whether linked transactions are exploitative in nature compared to non-linked transactions.

Thirdly, it becomes necessary to investigate the rationale behind the existence of interlocking in the backward rural economy.

#### 1.3.1 The Primary Investigation

In order to understand the nature and extent of credit arrangements among different types of rural households, intensive field surveys are necessary because the existing large-scale surveys, such as the Land Holding Surveys and the Rural Labour Enquiries by NSS, the Rural Credit Surveys by the RBI and the village surveys carried out by Agro-Economic Research Centre in India, do not capture the intricacies of the interlinkages. In view of this, data have been collected under the present investigation on the transactions of the households in all the agrarian markets, such as land, labour, credit and output.

The field investigation was conducted during the year 1990-91 and the information pertain to the year just preceding. We followed a three-stage sample design to select 301 cultivators from 12 villages. Data for a sample of 40 landless labour households selected randomly from these villages was also separately collected. Collection of data was done by personal interviews on the basis of specifically designed questionnaires and later cross-checked against corroboration provided by other people living in the villages. We also interviewed credit agencies, both formal and traditional, with whom our sample households have had transactions.

## 1.4 A Survey of the Literature

### 1.4.1 Rural-Economic Stagnation

The subject of agrarian backwardness has received considerable attention in traditional economic theories as well as in current researches on both theoretical and empirical works. These studies focus, in particular, on the causes of technological stagnation, the consequences of different terms of land tenure systems, labour-arrangements and the nature of rural credit market.

It has been argued by some economists that certain tenurial arrangements could dampen innovation and generate inefficiencies. Both Adam Smith (1776) and Marshall (1920) examined different land-tenure systems and came out with the same conclusion, preferring fixed rental tenancy to share tenancy. In a fixed rental system, the landlord receives a fixed rent from the tenant and the tenant earns the residual. On the other hand, in the share tenancy system, the landlord leases out his land to his tenant with the agreement that he will receive a fixed proportion of output. Therefore, in the fixed rental system the tenant is more interested to take innovative measures for raising the level of production, since all residual earnings go to the tenant after paying fixed rent to the landlord. Since under share tenancy the increased output resulting from innovative activities of the tenant would be proportionately divided between the tenant and the landlord, and the tenant could not enjoy the full benefit of innovation introduced by him, he would not be interested to introduce innovative measures under share tenancy and as such share tenancy system would be relatively stagnant.

It is, therefore, clear that the initiative for innovations rests with the tenants according to both Smith and Marshall. Innovations are more easily acceptable to a tenant in a fixed rental system than in the system of share tenancy.

But in a situation where risk and uncertainty factors are introduced in the production function of agricultural commodities, the landlords want to enter into the agreement of fixed rent tenancy system. The tenants, on the other hand, prefer share tenancy system to fixed rent tenancy in this circumstances. In the presence of uncertainty and risk factors, the possibility of adoption of innovative measures by the tenants has not been considered by Smith and Marshall.

There are many sociological and anthropological studies on stagnation in rural economy. Among the sociological theories, the most important is that of Epstein (1967). Based on her study of rural south India, Epstein contrasts two alternative systems for organising economic activities in a rural economy: The *customary system of rewards and obligations* and the *contractual system*. The contractual system is similar to the system of market exchange. But in customary system, agreements between landlords and tenants are made by the customs. In this system, all payments made to the landlord and all duties performed by the tenants are fixed hereditarily and they pass on from generation to generation. Epstein (1967) shows that this customary system is fundamentally averse to innovations and the society with a greater dependence on the customary system is more likely to stagnate. According to Epstein (1967), if any new technology is to be introduced, incentives and efforts are required from both sides of landlords and tenants. But the tenants or workers have neither any customary obligation to provide the additional effort nor any incentive to do so, since under the customary system the landlord can not pay them more. Similarly in this system the landlords are not interested to adopt labor-saving technology because of their customary payments to their tenants and workers regardless of the presence or absence of technological innovations.

Several empirical studies have been made to identify the most critical obstacles to innovations in the agrarian economy. There seems to be some agreement that one of the most critical obstacles to innovation has been the unavailability of credit (Byres, 1972; Griffin, 1974; Newbery, 1975). According

to Griffin (1974), a large amount of initial expenditure is required for the introduction of new technology in the production process. Since the landlords in the primitive sectors are often small-scale farmers with hardly any access to credit, their ability of innovation is limited. Hence the absence of innovation in the agricultural sector is not due to the landlords' unwillingness but due to their inability. By this argument the few rich landlords with their own liquid money and greater access to urban credit are the only ones prone to innovate (Byres, 1972). This also implies that growth and equity are antagonistic in a primitive economy.

In recent years, a growing part of theoretical literature on rural development has emphasized the role of interlinked transactions existing between land, labour, credit and output markets in a poor agrarian economy. The importance of the study of interlinkage in an agrarian economy arise in their importance as both phenomena as well as factors in agrarian backwardness. Interlinkage is said to exist when the same individuals (e.g. landlord and tenant) transact with each other in two markets (e.g. landlease and credit market) or more than two markets (e.g. landlease, credit and labour markets) simultaneously. Anthropologists have often emphasized the various types of multi-faceted relationships in small face-to-face communities. Gluckman in his studies of tribal Africa has called such societies 'multiplex' where each individual plays not one but a variety of roles in interacting with fellow members of his community. Narrating his experience with the hill peasants of Orissa, Baily (1971) notes : 'the watershed between traditional and modern society is exactly this distinction between single-interest and multiplex relationships.'<sup>4</sup>

Interlocking of different agrarian markets is likely to have the following two different, but interrelated, implications : (i) This reduces the number of persons who control the 'system of market to a few; (ii) At the same time, a single tenant or labourer or producer faces the same person in different markets and thus becomes more dependent on a single person. In both ways, the interlocking of markets is expected to increase the quantum of surplus- extraction. Marxists often cite some of the interlinked agrarian contracts as 'institutional obstacles to development in a poor agrarian economy, overlooking the microeconomic rationale of the formation of these institutions. Under a set of informational constraints and missing markets, a given agrarian institution (say, sharecropping) may be serving a real economic function; and its simple abolition, as often demanded on a radical platform, without taking care of factors that give rise to this institution in the first place, may not necessarily improve the condition of the intended beneficiaries of the abolition programme. Marxists have also a tendency to equate some of the pre-existing production relations mechanically with the 'feudal' or 'semi-feudal' mode of production, ignoring how in the real world the same institution (say, sharecropping) adapts itself to the development of the forces of production."<sup>5</sup>

One of the major forms in which land and labour market relations are interlocked is of course, through the institution of sharecropping tenancy. "Costs of labour recruitment and supervision lead landowners to look for land lease contracts instead of self-cultivation with hired labour and given that ..... input is difficult to monitor without heavy supervision costs, there is a preference for sharecropping. Such a monitoring problem is, of course, more important where on account of weather and other reasons there is production uncertainty so that it is difficult to infer input from output. Uncertainty of sustained employment at a given wage rate or uncertainty of wage rate induces the labour to look for tenancy contracts."<sup>6</sup>

Sharecropping has another virtue. It often "serves the purpose of enabling a fuller utilization of the non-marketable or not easily marketable resources (like family labour, particularly female and child, given the various social and economic constraints on their market participation, and like drought animal labour, given the fact that market for animal labour renting is often rather inactive) possessed by the potential tenant family. The absence of a market in which he can sell the services of his bullocks or his

own farm managerial skills in his spare time leads the person who owns such indivisible factors to lease in land and reap the scale of economics arising out of such indivisibilities. Such leasing in can take place at fixed rent per acre but in a situation where production uncertainty is important crop-sharing may be a better contract from risk-sharing point of view.”<sup>7</sup> The sharecropping tenancy in the landlease market may, therefore, be regarded as a partial response to inadequacies or imperfections in other markets. The understanding of the functioning of traditional economies will remain incomplete if we fail to recognise the rationale of the formation of these institutions.

All the studies on interlinkage approach can be divided into two groups : the theoretical models and the empirical works. Of these, the first group is now outlined.

#### 1.4.2 Interlinkage : The Theoretical Framework

The most important theoretical models on interlinkage are built by Bhaduri(1973), Ghosh and Saith(1979), Griffin(1974), Newbery(1975), Srinivasan(1979), Bottomley(1964), Braverman and Srinivasan(1981), Braverman and Guasch(1984), Gangopadhyay and Sengupta(1987), M.R. Gupta(1987), Bardhan(1984) and A Kotwal(1985). These models focus on different aspects of interlinkages and their implications on development process.

Prof. Amit Bhaduri (1973) provided a new hypothesis to explain the stagnation in backward agriculture. In his model, it is assumed that the entire responsibility for innovations rests on the landlord and the landlord may not be interested in innovations. In a semi-feudal agriculture a landlord has two sources of earnings. He earns as rental a proportion of total output. This is his *property income*. But this is not all. The landlord also earns income by charging an exorbitant interest rate on the consumption loan provided to his tenants. This is his *usurious income*. If technological innovation takes place, the tenant's income goes up, his need for consumption loan goes down. Hence it is possible that an innovation lowers the net income of the landlord. For this reason, the landlord may not be interested in innovations. As a result, stagnation continues to prevail in the backward agriculture. This provides a simple example of interlinked landlease and credit contracts working as a barrier to technological progress. In Bhaduri's words, “Since semi-feudal landowners as a class largely maintain their economic and political control over the *kishans*<sup>8</sup> by keeping them in bondage of perpetual indebtedness, it is quite probable that they will try to restrict the level of technological improvement in such a way as not to disrupt the perpetual cycle of debt in which the *kishan* is caught.”<sup>9</sup>

A necessary condition of Bhaduri's result is that the tenant reduces his borrowings when his income increases as a result of introduction of yield-raising innovations. But Srinivasan (1979) shows that in case of unanticipated production failure (say, due to bad weather conditions), the sharecroppers are forced to render under-paid labour services for meeting their debt obligations to the landlord. In this case the sharecroppers do not lower their consumption borrowing when their mean incomes go up and thus landlord's incentive to innovate is not adversely affected.

According to Ghosh and Saith (1979), Griffin (1974), Newbery (1975) and Raj (1978), the landlord having sufficient power to exploit his tenant -borrower and to withhold innovation in the socio-economic environment of the backward villages, must have sufficient power to extract the extra gain from innovations by suitably adjusting the rental share, the interest rates and other terms and conditions of tenancy and credit contracts. Contradicting Bhaduri's observation, they argue that landlord's interest in usurious income is a weak constraint for the non-adoption of technological progress.

The 'risk based' explanation of interlinkage has been suggested by Bhaduri (1984), Basu (1983), Wharton (1962), Bottomley (1964), Tun-Wai(1958), and Raj (1979). The 'risk- hypothesis' has been used to explain interest rate differentials between the organised sector and the backward agricultural sector.

The rates of interest are seen to be very high in backward agriculture compared to the urban credit market. It has been argued by Tun-Wai(1958) and Bottomley (1975) that money-lenders in backward regime face a positive risk of default and once this is taken into account, the effective rates of interest prevailing in backward agricultural regions become very high. However, Raj (1979) points out that in the rural credit market, there exists a personal relation between the lender and the borrower. The borrower generally can not leave the village without repaying the amount borrowed from the landlord. Hence, risk cannot explain more than a very small amount of the premium on the rural interests. Raj(1979) calculates that only 10 percent of the credit advanced by the money-lenders is defaulted in the rural areas on the average.

Bottomley (1964) points out that the higher rates of interest in rural areas can be explained only by 'monopolistic nature' of the credit market. Each lender supplies credit only to those over whom he has some controlling power. The 'monopoly power' of the village money-lender actually lies in his intimate knowledge of the borrower's economic conditions, ability to repay the loan, etc. The disaggregatedness of rural credit market is responsible for multiplicity of rates of interest which are very high.

Bhaduri's model(1977) is a critique of the conventional default rate hypothesis of Bottomley (1963,1975) where high interest rates are charged to cover the risk of default. According to Bhaduri (1977), a typical borrower in the unorganised credit market has no access to organised credit because the collateral he offers is unacceptable in the organised market. This, in turn, gives a certain degree of monopoly power to the rural money-lenders to whom his collateral is acceptable. Further, the highly personalised relationship between the lender and borrower permits the lender to secure the collateral easily from the borrower in the event of a default. According to this model, only the defaulted principal is recovered from the borrower through the transfer of collateral. In contrast to this, Gangopadhyay and Sengupta (1987) argue that with so much monopoly power over the borrower, the lender could recover the whole amount of default, i.e. the defaulted principal and the defaulted interest. Lender's risk is then reduced to an irrelevant concept. It is now primarily a question of borrower's risk in the case of default. The existence of high rates of interest ensure that the borrowing peasant is caught in, what Bhaduri calls, a nexus of 'forced' commerce. The commercial exploitation of the small peasantry by merchant's and usurer's capital manifests itself in the involuntary involvement of the peasant in the market for foodgrains both as buyer and as a seller. According to Bhaduri, the commercial exploitation operates in the following fashion: "to meet his cash requirement, the peasant is forced to sell such a high proportion of his output (as "distress sale") immediately after the harvest that he is left with too little to survive till the next harvest. Consequently, he has to borrow cash at a high rate of interest to buy foodgrains from the market sometimes before the harvest (as "distress buying"). Thus, for a small peasantry as a whole, a regular cycle of distress buying and selling of foodgrains is set up."<sup>10</sup>

Kausik Basu (1983) and Pranab Bardhan (1984) have considered 'the potential risk' as the main cause of interlinkage among different markets. According to them, a market having potential risk has always a tendency to seek another market with which interlocking arrangement can be made. Two different types of risks have been explained separately by them.

Using the 'Lender's Risk Hypothesis' Basu (1983) argues that generally the lender bears the risk of defaulted loans. In order to avoid the risk, he wants to impose controlling power over his debtor. Being a capitalist producer, he employs the debtors as labourer in his agricultural farm. Then the lender converts himself to the lender-cum-employer in order to avoid the risk factor involved in lending activities and to recover the loan from the debtors.

In the 'Employer's Risk Hypothesis' Bardhan (1984) argues that the interlinked labour and credit contract is a risk-eliminating device by which the employers can avoid the uncertainty of getting adequate

labour supply at a cheap wage rate in the peak season when the demand for labour is very high. The employers generally advance credit to the agricultural labourers in the lean season on the condition that the borrowers would repay the loan by working in his farm in the peak season at lower than market wage rate. The producer thus turns to be an employer-cum-lender in order to save on his recruitment cost and to get readily available labour supply in the peak season.

Both the Lender's Risk Hypothesis and the Employer's Risk Hypothesis have been criticised by M.R. Gupta (1987). In both these models, the lender enters into the labour-cum-credit contract with the debtor in order to eliminate the risk of default. But this careful effort made by the lender-cum-employer will be fruitful, Gupta urges, only when the labour-cum-credit contract can prevent the debtor-cum-worker from leaving the village without repaying the loan. Moreover, Bardhan's Employers Risk Hypothesis will be ineffective if the rural sector is over supplied by agricultural labourers.

According to Gupta (1987), 'potential risk' is not an important explanation of the emergence of interlinked labour-credit contract. Interlinked labour-credit contract may exist even in a riskless world. Gupta has explained the presence of interlinkage with the help of 'Consumption Efficiency Hypothesis' of Leibenstein (1957). According to this hypothesis, the nutritional efficiency of the worker is a positively sloped function of his level of consumption in the lean season. Gupta therefore introduces a lag concept in consumption - efficiency hypothesis. For this lag concept, Gupta's model differs from the earlier version of consumption efficiency hypothesis in which instantaneous relationship between borrowing and consumption is assumed. According to Gupta, consumption loan given to labourers in the lean season is considered to be productive to the employer in the peak season. For this reason, the consumption of the worker in the lean season is considered to be the input in the production function in the peak season. So the employer himself controls the volume of consumption loans in order to utilize the labour input (in efficiency units) efficiently. By offering interlinked credit-labour contract, the employer earns interest income and the higher level of output simultaneously in the peak season. This is, according to Gupta, "how interlinked labour-credit contract is explained as profitable to the employer even in a riskless world ; and the basis of this explanation is the consumption - efficiency hypothesis that considers the productivity of the worker in the peak season as a function of his level of consumption in the lean season."<sup>11</sup>

All these hypotheses, namely, Lender's Risk Hypothesis, Employer's Risk Hypothesis and the Consumption Efficiency Hypothesis consider only the interlinked labour and credit contracts. Interlinked tenancy contracts do not find any place in these discussions. Moreover, in Gupta's model it is implicitly assumed that the whole part of consumption loans received by the labourers are used to purchase goods by which they can raise their nutritional efficiency. But in practical life, the picture is somewhat different from what is assumed in Gupta's model. A large part of loan taken by the labourers in the lean season is usually spent on medical treatment, social rites and rituals, etc. Among all these hypothesis, Bardhan's Employer's Risk Hypothesis has been empirically tested and proved to be valid even in a labour surplus agrarian economy.

The tenancy system which remains unmentioned in the risk-based hypotheses, has received sole importance in different models of linkage between land, labour and credit transaction built separately by Braverman and Srinivasan(1981), Braverman and Stiglitz(1982), Ashok Kotwal(1985), Braverman and Guasch(1984), Pradip Mitra(1993), Bell and Zusman(1977), Gangapadhyaya and Sengupta(1987). All these models are now discussed in turn.

Braverman and Srinivasan (1981) shows that when the landlord, through plot size variations, can force the tenant to a 'reservation' utility level (at which there is a perfectly elastic supply of tenants), it is in the interest of the landlord to ensure that the tenants gets credit from the cheapest source. In an

imperfect credit market, if the interest charged by the local money-lender is higher than the landlord's opportunity cost of capital, then for his own interest, the landlord will offer credit to the tenant at the cheapest interest cost by making credit contract with him.

It therefore follows that Braverman and Srinivasan (1981) consider only consumption loans but not production loans which are also needed by the tenants. Moreover, they do not discuss the possibility of credit-labour linkage between the landlord and the tenant.

Braverman and Stiglitz (1982), in an interesting thesis, consider the consumption credit used by the landlord as a monitoring device to extract maximum effort of his tenant. They consider a production process consisting of two periods. In the first period, the tenants are encouraged by the landlord to consume lavishly by taking loan at low interest rate from them. In the second period, to avoid low consumption the tenants are compelled to work hard to produce more for the repayment of loans immediately after the harvest. Thus by encouraging the tenants to take more loan and to consume lavishly at a certain period, the landlords are able to extract the maximum effort which is needed for maximum production.

Braverman and Stiglitz (1982) do not explain the long-standing debt which overlap many production periods. Furthermore, according to this model the loan transactions are independent of the state of nature and in every year the same pattern repeats itself. Thus Braverman-Stiglitz model explains the annually recurring pattern of advances that are automatically deducted from the harvest share but does not satisfactorily explain the long-standing indebtedness.

Kotwal (1985) argues that in the absence of an insurance market consumption loan within a tenancy arrangement can be regarded as a weather-dependent side-payment. In bad years, this component or side payment is positive as the tenant borrows, whereas in good years, it is negative as the landlord seeks repayment. Thus a sharecropping contract with an implicit consumption credit arrangement offers a tenant a share of the crop plus a side-payment, where the amount (positive or negative) depends on the state of nature. Consumption credit is, in fact, a risk instrument. It distributes risk associated with the randomness of the weather from the risk averse tenant to the wealthier landlord, without diminishing the tenant's incentive to work.

Braverman and Guasch (1984) provide an additional aspect of interlinked credit and tenancy contract in the context of production loans. In an economy with imperfect information and heterogeneous labour-force, interlinkages of credit and tenancy contracts may serve landlords as a screening device to identify more able and potential tenants. Since in an underdeveloped economy, the output share remains almost fixed at 50 percent for both tenants and landlords, such a social norm can be accepted by the landlord only when they are able to use credit instruments to screen so as to extract surplus from more able tenants. In this model, it is assumed that the landlords like to allocate their plots to the more able tenants, but the tenants' abilities are not observable or known to them. Since the difference in marginal productivity among the labourers are the result of differences in their ability in the production process, the landlords can exploit the fact to select workers by inducing the tenants to contribute some capital in the production process. Thus the tenants are compelled to accept the credit terms set by the landlords for the purchase of capital assets in order to avail himself of a plot of land from the landlord. Thus the production loan offered by the landlord act as a screening device to identify more able tenants. The sorted interest rate schedule is downward sloping reflecting the fact that the high-ability tenants being subsidized at lower interest rate for larger purchase of capital.

Pradeep Mitra (1983) argues that interlinking of labour, output and credit contracts in a rural economy may be considered as an attempt to improve allocative efficiency in the presence of 'moral

hazards' problem. The model also shows that all pareto-efficient allocations of wage and efforts require a combination of wage-cum-output sharing with consumption credit contract. Mitra explains the fact in the following way: Interlinkage system in terms of widespread use of contracts which link labour, credit and output decision among the same set of agents has been dominated in the South Asian agrarian scene. In such economies, the subsistence agrarian sector is a gamble in weather conditions and hence involve considerable amount of risk element. This hinders the smooth functioning of a market on competitive terms since the risk involved leads to great cost of monitoring and hazards with some kind of uncertainty. Under such circumstances, the landlords combine the role of supplier of credit to tenants with a provision of sharing of output and a power-owner who controls the work effort made by the tenant or labourer. Efficiency in allocation between wage and effort requires the intervention by the landlord with credit decision so as to influence the amount of effort decided to be expended by the borrower. The paper presented by Mitra shows that the public policy designed to help the rural poor by abolishing money-lending by landlords and granting tenant's access to formal credit market at competitive rates would actually be pareto-worsening condition for the landlords and the tenants.

A typical farmer in South-East Asian countries, according to Mitra, enters into a contract with the landlord to work in period 1 in return for wage,  $\alpha$  (say) and a share,  $\beta$ (say) of the output he produces. The harvest, however, becomes available in period 2, so that the farmer must borrow to finance first period consumption. The loan is paid back with interest in the second period. In a mathematical model, Mitra (1983) has proved by logic that a solution to the expected profit maximisation problem with respect to consumption ( $c$ ), effort ( $e$ ),  $\alpha$  and  $\beta$ , subject to a reservation utility constraint is pareto-efficient. In other words, when the four choice variables,  $c$ ,  $e$ ,  $\alpha$  and  $\beta$  are within the control of the landlord, they are chosen as to provide a pareto-efficient solution to the above maximisation problem. This is the unconstrained case in the sense that the landlord controls all the variables  $c, e, \alpha$  and  $\beta$ . Full interlinkage in contract therefore prevails.

Mitra also considers the constrained case when the farmers are assumed to decide on their respective effort supply, and consumption loan, so that the landlord has control over only  $\alpha$  and  $\beta$ . In this situation, Mitra has proved mathematically that where both  $c$  and  $e$  are out of control of the landlord, the pareto-efficient solution is unlikely to be achieved. In other words, the arguments for interlinking contracts involving credit and output have been strengthened by mathematical model of Mitra. Any amount of delinking where farmers are permitted to borrow freely would be pareto-inefficient.

The views expressed by Bell and Zusman (1977) are also similar to those of Mitra. Bell and Zusman looked upon interlinked rental and credit contracts as ways of internalising externalities generated by moral hazard considerations when there is production uncertainty and information asymmetries between the landlord and tenant.

Gangapadhyay and Sengupta (1987) presents a theoretical explanation for the existence of credit-product linkage in the rural economy in terms of a mathematical model. According to them, the dominant landlords in many villages are able to obtain institutional credit more cheaply than the tenants and the labourers. These landlords play the role of financial intermediaries between outside loan market and their tenants and labourers. In this situation, the landlord as a monopolist is able to establish the terms of trade between current consumption and future labour services. This imperfection in the credit market manifests itself in the form of apparently imperfect product market. It is often observed that farmers repay the loan by transferring their product to the lenders at lower than market prices. This implies that the farmers are compelled to make distress sale due to inaccessibility to the product market. At the same time, it is often observed that the same money-lender to whom distress sale is done, charges relatively lower interest rates to farmers.

In this paper, Gangapadhyaya and Sengupta (1987) argue that the transfer of crops by the borrowers to the lenders at lower than market prices does not necessarily reflect the borrower's inaccessibility to the product market. On the other hand, it is the imperfection in the credit market which manifests itself in the form of an apparently imperfect product market. Hence the distress sale does not necessarily happen due to the inaccessibility of the farmer to the product market. Removal of imperfection in the credit market will, therefore, benefit the farmer and it will help to reduce distress sale made by the small peasants. This model however considers linkage between credit and product markets only. Land and labour markets remain unmentioned in the analysis.

#### 1.4.3 Empirical Investigation

The interlinkage approach has not remained confined to the theoretical models only. Several attempts have been made to test its empirical validity by modern economists.

From the field survey on twenty six villages in Birbhum district, Amit Bhaduri (1973) observed the following characteristics of the agrarian economy in that region : (i) share cropping as the dominant form of tenancy in that area; (ii) continuous indebtedness of the small tenants; (iii) existence of two forms of exploitation, by virtue of usury and landownership, in the hands of the same landowner; (iv) lack of accessibility of the small tenants to both capital and product markets.

This type of production relation is described by Bhaduri as semi-feudal. Since landlords are more interested to earn usurious income from the indebted tenants, they hardly undertake any technological innovations in agriculture which would increase the income of the tenants' and thus reduce their dependence on the landlords. Bhaduri therefore observes that landlease market and credit market are tied up through the provision of consumption loan given to the poor tenants by their landlords. This interlocking credit-lease contract works as a barrier to the introduction of new technology.

Prodhan H. Prasad (1974) in a similar empirical work on three districts of Bihar (Purnea, Saharsha, Monghyr) observed the existence of semi-feudal relations in the production process in that region. In support of his observation, Prasad presents a profile of the poor peasants in his study region. Almost all the *semi-proletariat*<sup>12</sup> households are deficit ones in the sense that their bare minimum consumption expenditure exceed their incomes. They are thus forced to take consumption loan for big landowners at exorbitant rates of interest. The lenders do not insist on full payment even in the long-run. It often forces the debtors to sell their assets (mostly land) but rarely for complete repayment of the debt. It uses this debt obligation to force upon the direct producers a system of unequal exchanges, thereby deriving enormous economic benefits, such as cheap and assured labour for its own cultivation and better terms for leasing out land. In this way, the lender appropriates almost the entire surplus value to itself. Prasad thus concluded his observation in the following words : "Usurer's capital play a historically reactionary role which is not only responsible for low use of means of production and inimical to net investment in the agricultural sector but also responsible for widespread poverty, debt-slavery and semi-feudal bondage."<sup>13</sup>

From the study on Trivandrum Taluk in rural Kerala made by T.N.V. Kurup (1976) it is quite prominent that the rural credit market is completely controlled and dominated by the non-institutional agencies like professional money-lenders, friends, relatives, etc. The agricultural labour class is heavily indebted to the non-institutional agencies. The terms and condition of credit from all sources of non-institutional credit market are more or less the same. The rate of interest charged on the poor tenants and agricultural labourers are higher than the rate of interest charged on other classes of agricultural hierarchy. This system leads to greater attachment of wage-earning class to their respective employers compared to the other classes in rural society.

Shiela Bhalla (1976) from the study of Haryana villages in India observed the case of more complicated three-cornered interlinked exchanges. The workers take loans in the form of essential consumer goods from village shopkeepers, or grain dealers. These loans are repaid by the workers in the form of underpaid labour services given to the employer-cultivators. These employer-cultivators, in turn, repay the original creditor by adjusting his account with the original creditor (shopkeeper).

Krishna Bharadwaj (1974) is also of the opinion that the dominant rural classes are responsible for interlocking the markets through price and non-price links. Market and social power are vested in the dominant classes. Combining multiple functions, the dominant class often enjoys a superior position in more than one market simultaneously.

The prevalence of mode of exploitation that operates through a linkage between land and labour has been observed by Krishna Bharadwaj and Das (1975) in a study of eleven villages in Orissa. The interlocking arrangement among different markets, according to them, are made not by price but by direct compulsion imposed by the landlords. In the landlease market, the demand for leasing-in land by the tenants is very high compared to the supply of land. As a result the tenants are compelled to lease in land on exploitative terms. The merchant landlords very often dictate the tenants what to produce and whom to sell. Thus the product market happens to be controlled by the landlords through the landlease market. Some times, the tenants are forced to provide unpaid and underpaid labour services on the land retained by the landlords for self-cultivation. Such tied up relation between landlease and labour market inhibit the expansion of wage-employment in rural economy.

The findings of the study conducted by Bharadwaj and Das (1975) also reveal that the landlord lease out their small-sized land to the poor tenants having larger families. The poor tenants are then compelled to work hard with a view to getting their minimum needs. The landlords often provide consumption loans to the tenants in their needs against commitment of future labour supply. In certain cases, the landlord provide production loans to the tenants and compel the tenants to produce certain cash crops as directed by him. High cost of cultivation perpetuates the cycle of indebtedness to the tenants. The study however reveals that the social power is captured by the landlords by virtue of ownership of land. But the power of domination does not necessarily prevails among all the landlords over their tenants. The economically weaker sections have been dominated and controlled by the economically rich and powerful class, irrespective of relationship of landlord over their tenants. A number of non-cultivating landlords having small and medium-sized holding lease out their lands to relatively better-off tenants in the villages belonging to Zamindary Belt. On the other hand, many landlords having very small plot of land in the tribal areas leases out their land to the relatively better-off tenants and make themselves agricultural labourers. Therefore, the tenants are not always the exploited class in the rural community. While considering the nature of exploitation by the landlord over the tenants, it is therefore important to consider who leases from whom .

The study carried out by Chattopadhyay and Ghosh (1983) in the Northern part of West Bengal indicates the existence of interlinkage between tenancy and credit contracts. They argue that the interlinkage between landlease and credit markets arise due to the lack of entrepreneurial and innovative role of landlord. They supported Bhaduri's observation that credit market of the tenants is dominant by their own landlords.

Asok Rudra and Pranab Bardhan (1978) have made a large-scale survey of 275 villages in Eastern India in 1975-76 which focus primarily on the terms and conditions of land, labour and credit contracts. The findings of the study seems to be different from the results obtained from the empirical works presented earlier. The landlord, Rudra and Bardhan observe, is an important though not the only source of credit to his tenant. However, in the landlord-tenant relationship usury does not dominate as the mode

of exploitation and as such evidence from Eastern India is quite contrary to the hypothesis that usurious income from the indebted tenant hamper the landlord's incentive to encourage productive investment. Very few landlords practice money-lending as the principal occupation of his landlord. In majority of the cases the tenants reported self-cultivation as the principal occupation. A large percentage of tenants in Eastern India obtain interest-free consumption loans from their landlords. Interest-free production loans are also provided by the landlords in certain cases. Production costs are also shared between the landlords and tenants. Production costs as well as cost-sharing obviously indicate strong interest on the part of the landlord in productive investment in leased-out land. Tenants very often render certain services for the landlord. But in most of the cases they are being properly paid. Rendering unpaid or underpaid services by the tenant for the landlord is far from being the prevalent general pattern. There are very few cases where the tenant reports that the tenancy contract prohibits him from leasing in land from more than one landlord. Indebtedness of the labourer to his employer is not, however, uncommon. The casual labourer very often takes consumption loan from employer against future commitment of labour. The consumption loans to wage labourers are occasionally interest-free; sometimes interest is charged in the form of a wage-cut for a casual labour. But loans taken by the labourer, do not in general lead to long-term bondage relationships. The survey in Eastern India suggests that the overwhelming majority of tenancy and attached labour contract do not display feudalistic features. "Desperate conditions of poverty and unemployment afflict the peasant in the labour market, but not so much extra-economic coercion. The attached labourer has longer duration contract with his employer than the casual labourer, but this does not usually imply serfdom to any significant extent more than the case of tenured and salaried employees in the organised labour markets. The employee's need for job security and the employer's need for a dependable and readily available source of labour supply and not feudal subordination - provide major motivation of attached labour contracts."<sup>14</sup>

The results of field investigation conducted by Kailas Sarap (1991) in rural Orissa in 1981-82, however, do not corroborate the findings obtained by Bardhan and Rudra (1978). Sarap observed that hardly 5 percent of the tenants had obtained production loans from their landlords without interest compared to a figure of 15 percent observed by Bardhan and Rudra (1978). Fixed tenancy is the dominant form of tenancy in the area. Cost-sharing between the tenant and landlord is negligible. Sarap (1991) observed multiple exchanges existing between land, labour, credit and output markets in the study area. Credit-labour linkage is the dominant form of linkage, followed by credit-output linkages. All such linkages are exploitative in nature because they entail very high effective rates of interest.

The field-survey in Nadia district in West Bengal undertaken by Khasnabis and Chakraborty (1982), did not show any strong interlinkage between tenancy and credit contracts. Typical landlords usually do not enter into the usuary practices with their tenants, who nevertheless, are at the subsistence level. Non-landlord loan-givers (traders, money-lenders, etc.) actually dominate the rural credit market. The pattern of tenancy-credit linkage observed by the study is therefore consistent with what is observed by Rudra and Bardhan (1978).

In the study on the Northern part of West Bengal, M. Chattopadhyay and R. Bhattacharyya (1984) have examined interlinkages in a comprehensive framework of land, labour and credit relations. Two interesting findings which have come out of the study are as follows: (i) due to the backward nature of agriculture, most of the small landowners are compelled to lease out their land and join the rank of agricultural labourers and (ii) in majority of the cases the employers are not interested in providing loans to the labourers. Labour market, in the region, is thus clearly delinked from the non-institutional credit market.

In a recent study of Midnapore district, Chadha and Bhaumik (1992) have observed a changing tenancy relation in West Bengal. According to them, the tenants in West Bengal are no longer the weaker party since they are enjoying political and organisational strength with active support from the state

government. Moreover, they found no interlinkage between landlease and credit contracts although some amount of interlinkage exists between landlease and labour markets. What is more important is that the tenants do receive wages at going market rate and tenancy-labour interlinking does not lead to any extra-economic coercion nor do the tenants lose their freedom to offer themselves in free labour market. The prevailing system, according to Chadha and Bhaumik, does not correspond to feudal or semi-feudal relations.

In a very recent study on Southern Andhra Pradesh, Wendy Olson (1996) observes some interesting phenomenon. Exploitation, Olson underlines, occur through credit relations but without usury. Moneylenders and landlords are two distinct classes in her study villages and the landlords are not involved in money-lending in the same way as the professional money-lenders are. The professional money-lenders are mainly the traders and their main interest has shifted from usury to commerce. With the growing commercialisation of agriculture many more traders have come into the business. The increased the volume of credit available in the informal credit market brought the interest rates down. They lend in order to clientelise the cultivating farmers and not for usury. Though she find an interconnection between different markets in her study area, these are very different from ones conceptualised by Bhaduri (1973). When the workers borrowed from an employer, it "gave the employer priority over the workers' time during peak labour-demand periods."<sup>15</sup> However, more important for her is the finding that "the tied transactions were not necessarily more exploitative than the united transactions"<sup>15</sup> and neither did the linked contracts improve the operation of markets as believed by many neo-classical economists.

In all the empirical works done in 1970's we find interlinkage as a means of exploitation of the weaker party by the dominant party. But recent studies in West Bengal and some other states in India would reveal no strong interlinkage among agrarian markets. Even if interlinkage exists in some markets it seems to be non-exploitative in nature.

However, most of the studies on interlinkage are partial in nature because they consider only two-market interlinkages, such as credit-output, credit-labour and credit-landlease markets. Since the imperfections in one or more markets have their repercussions in all others, a comprehensive study on interlinkage should simultaneously cover all agricultural markets, namely, those for land, labour, credit and output. Our study is therefore an attempt to examine comprehensively the phenomenon of interlocking in order to obtain a full picture of these from the perspective of agrarian relations in a backward rural economy.

### **1.5 Design of Study**

Since the purpose of the present study is to investigate the nature and extent of interlinkages among different agrarian markets in a backward rural economy, Cooch Behar provides an ideal field of investigation for the present study. The district of Cooch Behar is a backward district with poor production conditions in agriculture. Agriculture in the district thus primarily remains at primitive subsistence level with low productivity.

The volume of agricultural production in any agriculture-dependent region is determined, among other things, by Irrigation system within it. Irrigation, though an essential pre-requisite for agricultural progress, is still very limited in the district. The main source of water for agricultural operations is natural rainfall, which is marked by divergence in quantity, times and continuity over the agricultural year.

Irrigation facilities at present are inadequate since only 11.72 percent of net cultivated land are irrigated during 1990-91. In the absence of major irrigation projects, farmers in the district can only depend on minor irrigation schemes developed either at state or private initiative. The types of irrigation facilities available in the area are : River Lift Installations (RLIs), Shallow Tube Wells (STWs), Deep Tube Wells (DTWs), hand-operated pumps and pucca dug-wells. In the absence of adequate irrigation facility, the farmers face serious problems in cultivation of Rabi crops and in the early sowing of pre-kharif crops. Untimely advent of the monsoon and occurrence of dry spells sometimes causes serious crop-damage in the district.

The significance of irrigation in modern agriculture has increased, because inputs like chemical fertilizer and improved seed show very high response if they are combined with adequate and timely irrigation which also helps in ultimately changing the composition of crop-mix through crop-diversification. Thus irrigation plays a vital role in the agrarian development of a district which is relatively resource-poor, having no industries and other supporting infrastructural facilities. In our field investigation the incidence of minor irrigation serves as the primary criterion for comparative selection of sample blocks. A three-stage sample design has been adopted to select of the cultivating households for the sample survey in the present study. It seems to us that the only sure way of getting sufficient variation in the nature and extent of contractual arrangements in the informal credit market is to purposively choose the blocks to be studied. Thus at the first stage, we have purposively selected two blocks, otherwise having equivalent area coverage to formal credit, marketing and agricultural trade but distinguished by one block having comparatively better irrigation facilities, since in such a choice of blocks, irrigation would be causal to intrinsic differences within the widest economic range of well-off and poor agriculturists. Dinhata-I has been selected as the block with better irrigation facilities, along with Cooch Behar-II which has lowest irrigation in the district.

### *Some Features of the Selected Blocks*

We present below information on irrigation facilities, cultivation pattern and formal credit access in the two selected blocks.

**Table 1.1**  
**Agricultural Area Statistics for Selected Blocks**

Name of Blocks	Total Area (Ha)	Percentage of Cultivable Area	Percentage of Cultivable Area Irrigated by Non-traditional Irrigation
Dinhata-I	28,692	82.87	13.62
Cooch Behar-II	36,805	51.05	4.13

Source : *Compiled from Annual Plan on Agriculture (1986-87), Cooch Behar, and District Census Handbook, Cooch Behar, 1981.*

Some indication of the extent of irrigation-related variation between the blocks may be observed in the above Table 1.1 which shows that the percentage of irrigated area in Dinhata-I stands at around three times than in Cooch Behar-II, with the percentage of cultivated area also being higher in Dinhata-I.

126689  
15  
1 0 AUG 1999

West Bengal University  
Library  
Raja Rammohanpur

We also consider the difference in number of minor irrigation installations between the two blocks.

**Table 1.2**  
**Irrigation Installations in the Selected Blocks**

Name of Block	RLI	DTW	STW	Hand Tube-Well
Dinhata-I	11	16	1823	3085
Cooch Behar-II	10	7	1041	683

**Source :** *Compiled from annual plan on Agriculture (1986-87), Cooch Behar, and District Census Handbook, Cooch Behar, 1981*

We see that the installation of DWTs, STWs and hand-operated wells is much higher in Dinhata-I compared to Cooch Behar-II. Dinhata-I has the highest number of installations of government-operated irrigation schemes in the district (Table 1.2). As a result of higher extent of irrigation in Dinhata-I, the percentage area under HYV seeds, per hectare use of NPK fertilizer and also productivity of the major crop rice are also higher for this block compared to Cooch Behar-II (Table 1.3).

**Table 1.3**  
**Agricultural Technology Indicators in the Selected Blocks**

Name of Blocks	Percentage of Cultivated Area Under HYV Crop	Per Hectare Use of NPK (in Kg)	Productivity of Rice (kg/ha)	
			Traditional	HYV
Dinhata-I	17.82	62.15	543	1278
Cooch Behar-II	9.40	54.20	478	996

**Source :** *Compiled from Annual Plan on Agriculture (1990-91), Cooch Behar*

So far as the adoption of HYV seeds, intensity of fertilizer use, rice - productivity and irrigation facility are concerned, Dinhata-I may therefore be classified as agriculturally more developed than the Cooch Behar-II Block.

We may now take note of some of the demographic features of the selected blocks. 92.5 percent of the total population of Dinhata-I lives in rural areas whereas the corresponding percentage for Cooch Behar is about 99 percent. Scheduled Caste and Scheduled Tribe population constitute 39 percent and 0.37 percent of the total population in Dinhata - I, 36.25 percent and 0.88 percent respectively in Cooch Behar-II. Dinhata-I therefore has a higher percentage of SCs but a lower percentage of STs in its population compared to Cooch Behar-II. Agricultural labourers constitute 8.1 percent of the total population in Dinhata-I against 6.6 percent in Cooch Behar-II.<sup>17</sup>

Since the issues in our study are very much related to the access to institutional credit on the part of agriculturists, we now consider the information on institutional finance in the selected blocks, which however shows better access for Cooch Behar-II (Table 1.4).

**Table 1.4**  
**Coverage of Selected Blocks by Institutional Credit**

Name of Block	Number of Bank Branches	Population	Population Per Branch
Dinhata - I	8	1,95,374	24421.75
Cooch Behar - II	9	2,02,911	22545.67

**Source :** *Compiled from Annual Plan on Agriculture (1983-87), Cooch Behar*

The apparent reversal between blocks in terms of coverage by institutional credit may be attributed to the proximity of Cooch Behar-II to the district capital. Despite this the utilisation of institutional Credit in Dinhata-I is comparatively better, as shown in the figures for 1986-87 in Table 1.5.

**Table 1.5**  
**Credit utilisation in Selected Blocks (1986-87)**

Name of Block	(in lac Rs.)		
	Agricultural Crop Loan	Agricultural Term Loan	Total
Dinhata - I	13.40	15.20	28.60
Cooch Behar-II	11.90	12.40	24.30

Source : *Compiled from Annual plan on Agricultural (1986-87), Cooch Behar.*

Having first selected the sample blocks, at the second stage we have purposively selected 6 villages from Dinhata-I block with relatively better irrigation facilities and 6 villages from Cooch Behar-II with irrigation access around the block average, in order to preserve the intrinsic range within the data.

Of these, the 6 selected villages in Dinhata-I all display high cultivated areas under non-traditional irrigation schemes at around 30-40 percent, considerably higher than those for the Cooch Behar-II villages. Of the 12 villages that constitute the sample after the second stage, the relatively developed villages of Dinhata-I are grouped and designated as the comparatively developed Region-I, against the villages of Cooch Behar-II grouped under Region-II.

#### List of Selected Sample Villages

<i>Region I : Dinhata - I</i>	<i>Region II : Cooch Behar- II</i>
<i>1. Bara Nachina</i>	<i>1. Kachuban</i>
<i>2. Koalidaha</i>	<i>2. Haripur</i>
<i>3. Salkura</i>	<i>3. Marichbari</i>
<i>4. Chhota Soulmari</i>	<i>4. Gopalpur</i>
<i>5. Bhoram Payasthi</i>	<i>5. Takagachh</i>
<i>6. Ruerkuthi</i>	<i>6. Bareswar</i>

#### *Some Characteristics of the Selected Villages*

We now discuss some of the relevant characteristics of 12 villages selected for the purpose of field investigation. Region-I villages are all endowed with government-owned electrified DTWs. A number of subsidised community-owned irrigation schemes of electrified-type, STWs are also in operation here. Besides this, the better-off farmers have also installed diesel-powered STWs to ensure adequate water available at critical stages of paddy cropping season. Rice is the dominant crop in these villages. The traditional varieties of paddy are sown in the Aus and Aman periods. Production of HYV paddy (February-May) under the boro crop is also encouraging, this crop being characterised by high yields in an otherwise lean period. Because of irrigation production of winter vegetables is gaining popularity in these villages. However, usage of tractors is very low. But usage of power-tillers has increased considerably although wooden ploughs still predominates.

The character of production in Region-II villages is comparatively backward. Although rice is the dominant crop in these villages, its productivity is comparatively low. The production of HYV paddy is virtually non-existent due to the lack of proper irrigation facilities. Production of winter vegetables takes place but the scale of operation is very low.

Coming therefore to the third stage of the sampling procedure, a stratified random sample of cultivators has then been chosen from the local panchayat list of cultivators in each village which included both owner cultivators and tenant cultivators. For this exercise, cultivators in each village were divided into six ownership groups in terms of landholding as shown below :

**Table : 1.6**  
**Classification of Cultivators into Ownership-Groups**  
**Used by the Study**

Size-Group by Ownership of Land (in acres)	Nomenclature
0	Landless
0.01 - 1.25	Sub-marginal
1.26-2.50	Marginal
2.51-5.00	Small
5.01- 7.50	Medium
7.51 & above	Large

*Note : Landless cultivators above do not operate any owned land.*

### ***Selection of Respondents***

Table 1.6 has indicated the stratification of cultivators. From the total sample-frame we selected 25 percent of cultivating households uniformly from each village, and from each stratified group of cultivators, a stratified sample of cultivator - respondents was randomly selected in proportion to the distribution of ownership holdings within the village. In addition to this sample, 40 landless labourers were also randomly selected. The overall sample used by the study therefore consists 341 households of which 301 are cultivators and 40 are landless agricultural labourers. Depending on proprietorship rights over land operated, the cultivators in our sample are classified into two categories of *pure owner-cultivators* and *tenants*. Out of 301 cultivators in the sample, 184 fall in the first of these categories and 117 in the second. The definitions employed are further clarified below :

*Pure owner-cultivators* are those cultivators who operate entirely on self-owned pieces of land. The proportion of leased-in land in total area operated by them is, therefore, zero. By our definition, pure owners are not necessarily big cultivators, even though those among them who operate smaller sized plots, may sell their labour services to supplement meagre farm income, and therefore have a dual function.

Tenants, or tenant cultivators are those who lease in the land they operate from others and may be further sub-classified as

- (i) Pure Tenants, who do not have any land of their own at all and lease in all the land they cultivate.
- (ii) Owner Tenants who have some land of their own in addition to that which they lease in.

The two categories of tenants are sometimes also referred to as *landless* tenants and *mixed* tenants respectively.

The above definitional categories can be separated from within the sample of 301 cultivator households by considering the ratio of leased-in land to operational holding or Lease-Ratio (Lr) in terms of the following formula :

$$L_r = \frac{\text{Land leased-in for cultivation}}{\text{Total operated area}}$$

$$= \frac{L_i}{L_o}$$

Where  $L_i$  = Area Leased-in for Cultivation

$L_o$  = Operational Holding

Given the values of the  $L_r$  - ratio, the cultivator categories are defined by the following relationships.

Pure Owner-cultivators	$L_r = 0$
Tenants	$0 < L_r \leq 1$
(i) Pure Tenants	$L_r = 1$
(ii) Owner Tenants	$0 < L_r < 1$

Since no lease-out operations on owned land were observed among the owner tenants, the concept of *net* lease-in of land does not occur and has been ignored.

Our sample therefore consists of three classes of households : pure owner cultivators, tenants and landless agricultural labourers. There are 184 pure owners, 117 tenants and 40 landless labourers. Among the tenants, 114 are mixed and 3 are landless tenants.

## 1.6 Structure of Investigation

As an evaluation of these issues in the empirical context of Cooch Behar, an investigation was undertaken into the character of linkage in the agrarian economy of the district. It has been noted in the preceding review that the number of micro-studies pertaining to Eastern India are relatively few. The present study will thus fulfil an important research gap in the understanding of the *in situ* agricultural condition of the region as well as the applicability of theoretical constructs to the special regional context.

A few words might be said about this context. Eastern India and the sample region within it constitute a high-rainfall and traditionally rice-growing area, which as all rice economies, is organised around the family-labour based rice-economy. One of the peculiarities of this crop-defined economy is extremely labour-intensive cultivation. Another is the peasant economy character of the production mode. Although the presence of agrarian inequalities more or less reflect land dispossession and pauperisation trends among the peasantry, the scale of such phenomena is limited by the lower range of inequalities and the extraordinarily high resource-intensity of rice cultivation. As a result, the character of agriculture in this region differs radically from the other parts of India leading also to differences in land organisation.

An added peculiarity is provided to the study by virtue of the state of West Bengal's having gone through a process of land reorganisation and reform both through implementation of very strict land-ceilings and registration of tenancy rights, the latter being known as Operation Barga (OB) launched in 1977. Recently, rising agricultural trends in the state reflect some gains from this which are widely dispersed among the agriculturists instead of being concentrated in the hand of rich farmers. The overall consequence has been a consolidation of the peasant economy mode.

Given the special features of this region, the present study will group its data and findings over the five chapters that follow. Of this, Chapter 2 of the thesis provides an introduction to the socio-economic

and agricultural background of Cooch Behar district. Chapter 3, 4 and 5 analyse the incidence-pattern of agrarian sector interlinkages among the differentiated classes of pure owner-cultivators, tenants and landless agricultural labourers in the study region, and Chapter 6 is a formal presentation of the study's findings and analytical conclusions.

The difference in the approach of this study as compared to approaches noticed in the literature is in its structure. *Ex situ* aggregative approaches which focus specifically on the operation of interlinkages tend to ignore the factors leading to their genesis. Interlinkages - no matter which part of the country they are seen in - are an outcome of internal organisational change in agrarian structure. As such interlinkages which bear an exploitative character are often conditional on the emergence and consolidation of a rural elite. Since West Bengal's recent experience has been towards dispersal rather than consolidation of land-holding and operations the character of interlinkages within its agrarian economy may have followed an evolutionary course which is distinct from more feudal regions.

However, to capture the problem in its full manifestation a study concentrating only on the operation of linked markets would prove inadequate. This is because such a study would try to isolate the phenomenon from the overall situation and thus, abstract from actual ground realities of agricultural market operations and their relation to the peasant economy and its components.

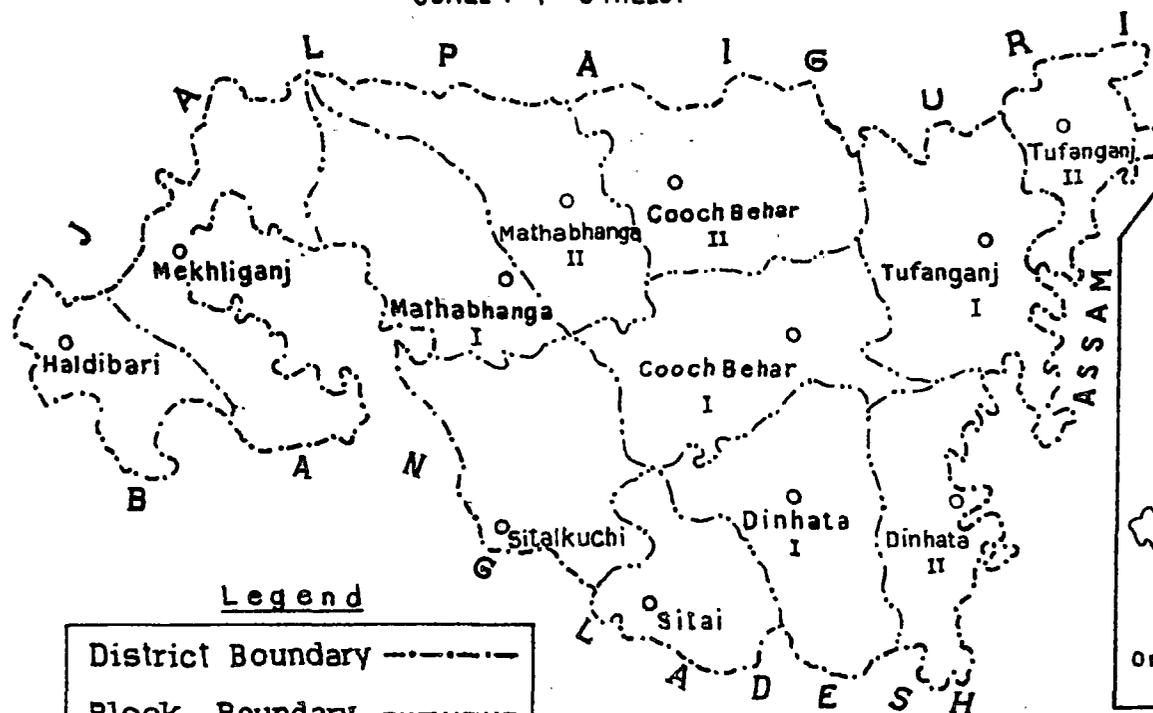
For such a reason the present study follows a disaggregated structural approach which explores the differentiation of credit-needs among rural classes, the relation of this credit-needs to the occupations and activities of these classes and the process of generation and fulfilment of specialised credit-needs. This is achieved in the study by first reviewing the credit structures and needs for the different borrower-classes and then by a detailed econometric investigation into the micro foundation of these needs and structures for a particular borrower-class. By adopting such a structure a more holistic evaluation can be made of the phenomenon of interlinkage and of the reason why it has occurred as an institution. Appreciation of the causes of this emergence also hold forth recommendations for reform of the institution in keeping with the internal character of the peasant economy, so that reform of the institution can be made with minimal dislocation of the functions it serves, and provide a possible solution to the problem of agrarian backwardness.

### Notes & References

1. Bardhan (1989) p. 237
2. cf. Thorner and Thorner (1962); Bharadwaj (1974); Bhaduri (1973, 1986); Prasad (1974), Wharton (1962); and Ransom and Sutch (1977)
3. cf. Braverman and Stiglitz (1982); Mitra (1983); Braverman and Srinivasan (1984); Stiglitz (1986)
4. Bardhan (1989), *op. cit.*
5. *Ibid*, p. 7
6. Bardhan (1980), p. 87
7. *Ibid*, pp. 87-88
8. Of the various categories of sharecroppers in West Bengal, the least privileged are a category who are locally known as *Kishans*. They virtually have no land of their own, provide little or no capital for production and typically have security of not more than one production cycle.
9. Bhaduri (1973), p. 130
10. Bhaduri (1983), p. 19
11. Gupta (1987), p. 191
12. 'Semi-proletariat' households have been defined [Prasad (1974:1305)] as : "The households who cultivate land mainly with the help of their family labour and at the same time supply labour to other cultivating classes. Some of them own some cultivable land. Quite a significant number lease in land mostly on crop sharing basis but in some cases on terms requiring payment in cash or labour services. .... A sizeable section is landless agricultural labourers".
13. Prasad (1974), p. 1308

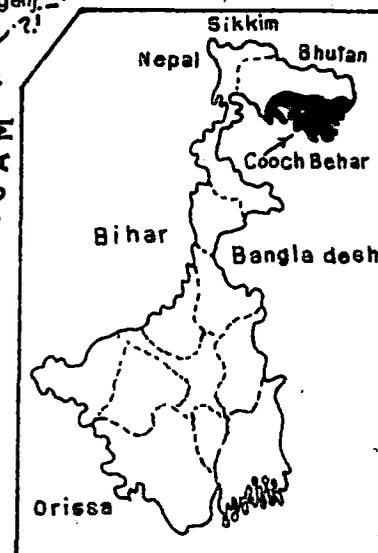
# LOCATION MAP OF THE STUDY REGION COOCH BEHAR DISTRICT

SCALE : 1 = 8 MILES.



### Legend

District Boundary	---
Block Boundary	---
Study Region	■
Block Head Qtrs.	○



WEST BENGAL

Figure - 1.1.

## CHAPTER 2

### ECONOMIC AND THE AGRARIAN SITUATION OF COOCH BEHAR DISTRICT

This chapter highlights some basic features of economic and agrarian situation of the district of Cooch Behar so as to provide a backdrop for analysis in the present thesis. The analysis in the chapter includes demography and natural pre-conditions, followed by a discussion on the state of industry and some other supporting infrastructural facilities in the district. The performance of agricultural sector has also been taken up, before going into the credit market structure. Evaluation of the rural credit market in the study area is necessitated to understand the nature of contractual arrangements in the informal credit market.

#### 2.1 General Features

##### 2.1.1 Location and Boundary

The district of Cooch Behar is the north-eastern district of West Bengal under the Jalpaiguri Division. Geographically, it forms a part of the Himalayan Terrain of West Bengal. It lies between 25° 57' 56" and 26° 32' 46" North latitude and 88° 45' 02" and 89° 52' 00" East longitude. It is bounded by Jalpaiguri district of West Bengal in the north, Assam and Bangladesh in the east and Bangladesh in the South and West. The district comprises an area of 3387.0 sq. kilometres which is roughly 3.82 percent of the total geographical area of West Bengal.

##### 2.1.2 Brief History

The name Cooch Behar is of recent origin and is a compound of two words. The word 'Cooch' came from the word 'Coch' or 'Koch', the name of an ethnic group of people living in the North-Eastern part of Bengal. 'Behar' or more properly 'Bihar' on the other hand, denotes an abode or spot. Cooch Behar therefore means the land of the Koch.<sup>1</sup>

Formerly the land pertaining to the present district of Cooch Behar was a part of a much bigger Kingdom which included a large tracts of Assam when it went by the name Kamrup and only after the Koch Kings had come into power in the beginning of the 16th century, it was called Cooch Behar.

In 1773 Cooch Behar became a feudatory State to the East India Company by virtue of a treaty. Until 1950 it used to be a feudatory State in political relations, first with the British Government and then with the Government of India. On the 28th of August 1949 an agreement was contracted between the Governor General of India and His Highness the Maharaja of Cooch Behar, which came to be known as the Cooch Behar Merger Agreement, in which His Highness the Maharaja of Cooch Behar ceded to the Dominion. After a series of talks between the Union Government, the West Bengal Government and the Government of Assam, in which the wishes of the people of Cooch Behar was taken into account, the Government of India reached the conclusion that the best interest of the people of Cooch Behar and of India as a whole would be served by the merger of Cooch Behar in the provinces of West Bengal. This was done with effect from 1st January, 1950.

The district of Cooch Behar is divided into 5 sub-divisions, viz., Sadar, Tufanganj, Dinhata,

Mathabhanga and Mekhliganj. There are only 7 towns in the district of which 6 are municipal. Therefore, the progress of urbanization is not satisfactory. The district is comprised of 12 blocks, 128 Gram Panchayats, 12 Panchayat Samities and 10 police stations. There are 1168 mouzas of which 1139 are inhabited.

## 2.2 Human Resources

### 2.2.1 Population Growth

In order to understand the nature of economic development of a certain region, the study of human resource becomes imperative. It is important because man is not only the creator of resource but also its user. A rapid growth of population may have an unfavorable impact on economic development if the increased manpower is not properly utilized in the development process. The nature and growth of population of our study area, therefore, naturally comes into discussion.

The district of Cooch Behar has a long border with Bangladesh. In-migrants from across the international borders had been an important component of growth of population in the district.<sup>2</sup> The immigration of displaced persons from East Pakistan (now Bangladesh) began largely since 1950-51. In 1951, total population of the district was 668949. The census of 1961 however counted 1019806 persons. During the period 1951-61, the population of the district therefore increased by 52.45 percent compared to a rate of 32.8 percent for the state of West Bengal. Over the decade 1951-61, the growth of population of Cooch Behar had been phenomenal. In fact, Cooch Behar recorded the highest rate of growth of population as compared to other parts of West Bengal. Settlement of displaced persons in different parts of the district had a great bearing on the growth of population during the decade. During this period a number of 201953 persons immigrated to this district.

In 1971, the population of the district rose to 1414183. The decennial growth rate of population for the district (38.67 percent) was considerably above the decennial population growth rate for the state (26.87 percent). The same pattern of population growth also continued during the following decades. In 1981, the total population of the district rose to 1771643 registering a growth rate of 25.28 percent during the decade 1971-81 which was also higher than the state figure of 23.17 percent.

At present (1991 census), the population of the district exceeds 20 lacs. The rapid increase in population has led to a rise in population density over the years. However, the population density of the district (641) is lower than that of the state (677). The variation in the density of population of the district during 1901-1991 is presented in Table 2.1

Table 2.1  
Variation in Density of Population (1901-1991)

Year	1901	1911	1921	1931	1941	1951	1961	1971	1981	1991
Density of Population (per sq.km)	430	450	450	448	486	509	776	418	523	641

Source : Census Reports

### 2.2.2 Composition of SC and ST

Scheduled caste and Scheduled Tribe population are very important to understand the structure of population. There is a high concentration of Scheduled Caste population in the district of Cooch Behar. Scheduled Tribe population is very negligible. The Tribe population is mainly concentrated in Tea Gardens. The composition of SC and ST population over 40 years is shown in the following table.

**Table 2.2**  
**Composition of Scheduled Caste and Scheduled Tribe Population,**  
**Cooch Behar District (1961-1991)**

Year	Population	SC Population	ST Population
1961	1019806	478340 (46.90)	8809 (0.86)
1971	1414183	665020 (47.02)	10611 (0.75)
1981	1771643	883084 (49.84)	10105 (0.57)
1991	2171145	1123719 (51.76)	13275 (0.61)

Note : Figures in parentheses denote percentages to total population.

**Source : Census Reports**

The concentration of SC population is highest in Cooch Behar among all other districts of West Bengal. Moreover, the proportion of SC population is increasing while the proportion of ST population is declining in the district over the years. The higher percentage of SC population is an indication of backwardness of the district.

The two principal communities in the district are Hindus and Muslims. As per 1991 census, 76.45 percent of the total population of the district are Hindus and 23.34 are Muslims. The high percentage of Scheduled Castes is dominated by Rajbanshis believed to be of Koch tribal origin who were eventually Hinduised. The other SC segments comprise Namasudra and other SC communities.<sup>3</sup>

### 2.2.3 Literacy Level

The quality of population depends on the level of literacy attained by the people. A modicum literacy is absolutely necessary for the purpose of meaningful participation of the rural people in development programmes such as adoption of better and scientific farming techniques, use of fertilizers and pesticides and family planning practices. Absolute level of illiteracy give rise to orthodoxy in Indian society and is responsible for the perpetuation of poverty.

As per 1991 census, the literacy rate in Cooch Behar is 45.8 percent which is much lower than the state average of 57.72 percent. The male literacy rate is 57.4 percent compared to the female literacy rate of 33.3 percent. Although literacy rate in the district has increased over the years, it is still lagging behind the state and national average. The low level of literacy is another indication of backwardness and poverty of the district. The following table gives a picture of the literacy rates of the district of Cooch Behar.

**Table 2.3**  
**Literacy Rates of the District of Cooch Behar (1951-1991)**

Census Year	Percentage Literacy	Percentage Male Literacy	Percentage Female Literacy
1951	15.00	23.20	5.30
1961	21.00	31.40	9.30
1971	21.92	31.40	11.93
1981	30.10	40.09	19.43
1991	45.80	57.40	33.30

**Source : Census Reports**

A comparison of the literacy rate of the five districts of North Bengal in 1981 with that of the state of West Bengal also reveals the relative backwardness of North Bengal districts in regard to literacy rate. It is observed that (Table 2.4) out of the five districts of North Bengal, four have registered literacy rates which are lower than the state average.

**Table 2.4**  
**Literacy Level in the Districts of North Bengal (1981)**

District	Percentage Literacy	Percentage Male Literacy	Percentage Female Literacy
Darjeeling	42.52	51.58	32.38
Cooch Behar	29.99	39.99	20.44
Jalpaiguri	29.88	38.48	19.30
West Dinajpur	26.92	36.13	17.08
Malda	23.06	31.46	14.21
West Bengal	40.88	50.49	30.33

Source : *Census Report*

From the above table it appears that the literacy rates in the North Bengal districts are very poor. Malda and West Dinajpur occupy the weakest position in this regard. Darjeeling district has a higher literacy because of certain tradition of Anglo-Indian Schools in the area.

#### 2.2.4 Urbanisation

Cooch Behar is primarily of rural district. There is a heavy concentration of population in rural areas of the district. According to 1961 census, 92.99 percent of the population in Cooch Behar lived in villages as against 75 percent in the state of West Bengal. In 1971 the percentage of rural population increased to 93.16 percent as against 75.25 percent for the state. In 1981 census, the percentage of rural population was recorded as 93.10 which was much higher than that of the state as a whole (73.53). It therefore appears that the percentage of rural population of the district is much higher than that of the state of West Bengal. Table 2.5 shows the growth of rural and urban population in the district of Cooch Behar.

**Table 2.5**  
**Growth of Rural and Urban Population in Cooch Behar**

Year	Total Population	Urban Population	Rural Population	% of Rural Population	Decadal % Variation in Rural Population	Decadal % Variation in Urban Population
1951	668949	50181	618769	92.50	53.27	87.09
1961	1019806	71446	948360	92.99	52.26	42.38
1971	1414183	96652	1317531	93.16	38.93	35.28
1981	177163	122260	1649383	93.10	25.19	26.50
1991	2171145	169497	2001648	92.99	21.36	38.64

Source: *Census Reports*

The above table (Table 2.5) shows that the district of Cooch Behar is almost entirely rural. The progress of urbanisation has been very slow. Only 7.01 percent of the total population of the district live in urban areas compared to figure of 27.48 percent for the state of West Bengal (1991 census). This is an indication of the state of economy of the district which has remained almost entirely dependent on agriculture. The rural population derives its livelihood mainly from agriculture.

As per census report 1981, there were 7 towns of which 2 were administered by municipality, 4 by town Committee and the remaining, was non-municipal. Still now, i.e., according to 1991 census report, there are 7 towns of which 6 are run by municipality and remaining 1 is non-municipality.

Comparing the percentage of urban population in the five districts of North Bengal in 1981 with that of the state of West Bengal, we find a considerable variation in urbanisation process. Some districts are more urbanised than the average of West Bengal and some districts are very poor in respect of urbanisation process. A comparative study is made to show the nature of variation in the following table.

**Table 2.6**  
**Percentage of Urban Population in**  
**Different Districts of North Bengal**

District	Percentage of Urban Population
Cooch Behar	6.30
Jalpaiguri	14.96
Darjeeling	27.86
West Dinajpur	11.19
Malda	4.78
West Bengal	26.49

*Source : Census Report, 1981*

It appears from Table 2.6 that Darjeeling among other districts of North Bengal has the highest percentage of urban population and the percentage is even higher than that of the state average. But the ratio of urban population is very low in Malda and Cooch Behar indicating a slow process of urbanisation in the two districts. In fact the percentage of urban population in the districts of Malda and Cooch Behar is lower than the average of North Bengal and the average of the state. The comparative low growth of urbanisation in some of the districts of North Bengal reflects the nature of slow development in the area; because economic development is very often related to the process of urbanisation. Since urbanisation has been very slow in the district of Cooch Behar, it may be described as a backward district.

### 2.2.5 Occupational Pattern

The occupational structure of population of the district of Cooch Behar also reveals the backward nature of the area. As per 1991 census, 30.56 percent of the total population of the district are main workers. Out of the total main workers in 1991, 48.18 percent are cultivators, 26.04 percent are agricultural labourers and 2.30 percent are engaged in household industries. Therefore, a very high proportion of main workers (i.e. 74.22 percent) are engaged in agricultural sector. But the methods of cultivation are still orthodox. Farmers are still obliged to pursue subsistence farming which is retarding not only agricultural productivity but also breeding unemployment and poverty. Tobacco and jute are two major commercial crops of the region. But jute growers do not get remunerative price and the growth of production of tobacco is shrinking due to the lack of nearby market. Naturally, economic condition of the people is backward and their standard of living is low. It has been observed that the percentage of population engaged in agricultural sector falls slightly during the last ten years (1981-91) from 22.93 percent to 22.68 percent. The occupational pattern of the district therefore remains almost unaltered during the last decade. The following table shows a comparative picture of the sectoral distribution of population in the two census years.

**Table 2.7**  
**Distribution of Population According to Different Categories of**  
**Workers and Non-Workers in Cooch Behar**

Category	1981		1991	
	Population	Percentage	Population	Percentage
A. Total Main Workers	513590	28.99	663424	30.56
1. Cultivators	267173	15.03	319642	14.72
2. Agricultural Labourers	139914	7.90	172762	7.96
3. Household Industrial Manufacturing & Repairing Works	10356	0.58	15319	0.71
4. Other Workers	96147	5.43	155699	7.17
B. Marginal Workers	14370	0.81	34458	1.59
C. Non-Workers	1243683	70.20	1473263	67.85
Total Population (A+B+C)	1771643	100.00	2171145	100.00

Source : *Census Reports, 1981 & 1991*

It is seen from the Table 2.7 that the proportion of population engaged in industries registered a marginal increase from 0.58 to 0.71 percent during the decade 1981-1991. It therefore appears that industry plays a very minor role in the economy of Cooch Behar and remains almost stagnant over the decade. From the above table it is also revealed that two third (i.e. 67.80 percent) of the population of the district are non-workers. The high percentage of non-working population reflects the backward nature of the economy.

It is also seen from Table 2.7. that the percentage of agricultural labourers increases in the district of Cooch Behar during the decade 1981-91. The available literature<sup>4</sup> also suggests that there has been a sharp rise in the number of agricultural labourers in the district of Cooch Behar along with other districts of North Bengal over the decade 1971-81. The growth of agricultural labourers in West Bengal as a whole was 22.66 percent during this decade. However, the growth rate of agricultural labourers in each of the five districts of North Bengal surpassed the state average with Cooch Behar showing a rate as high as 141.58 percent followed by Jalpaiguri with 105.62 percent during the decade 1971-81. Among the five districts, Darjeeling had the lowest rate of growth of 24.58 percent, preceded by Malda with 28.43 percent. The sharp rise in the growth of agricultural labourers is quite indicative of the gradual pauperisation of the agricultural population in the district as well as in other districts of North Bengal.

Considering all the factors together we therefore observe that the quality of human resources is very poor in the district, a fact further strengthened by the observation that the HDI for the district of Cooch Behar is the lowest among all the districts of West Bengal. The district is lagging behind in respect of human resource development. While the HDI for the state of West Bengal was 0.436 in 1981, it was only 0.289 in Cooch Behar.<sup>5</sup>

## 2.3 Natural Preconditions

### 2.3.1 River System

Topographically, the district is a level plain with gentle slope towards the South - East. A large net-work of river and rivulets traverse the district from the North-West to South-East direction. Being very near to the foot hills, the rivers generally have a strong current and some of them often spill their banks after heavy shower in their catchment area, but the fall in the water level of the rivers is as sharp

as that in the case of rise. The main rivers of the district are Teesta, Mansai and Torsa. The other rivers worth mentioning are the Dharla, Kaljani, Gadadhar, Raidak and Sankosh. Among the small rivers Khutmara, Gilandi Dudua, Mujnai, Dolong etc. needs mention. All the rivers drain their water into the river Brahmaputra in Bangladesh either directly or after unity among themselves earlier.

### 2.3.2 Pedology and Climate

The soil of the district of Cooch Behar is formed by alluvial deposition of different river system. It is mainly sandy loam and heavy soil is found in small pockets only. Soil depths are normally low ranging from 15-100 cm, super-imposed on deep beds of sand. The base of igneous and /or metamorphic rocks lying at depth of 1000-1500 meters. The moisture retentive capacity of land in the higher situation is low with much less fertility. The lower situation is more fertile while in the middle order land, multiple cropping has gained popularity. With assured irrigation facility these lands can be better utilised for crop production. Out of the total cultivated land 5.7 percent is low land, 15 percent high land and the rest is medium.

The climate of Cooch Behar experiences roughly two seasons in a year viz. Summer and Winter. The Summer starts in April overlapped by monsoon and giving place to Winter in early November, the months of March and October marked the fag-ends of the two seasons. The monsoon starts by the middle of May and continues upto September, thereby extended over the great portion of Summer. Cooch Behar district has a moderate humid climate in a mean temperature range of 8° (January) and 37' 8° C (August) with heavy rainfall. The average annual rainfall in the district is about 3200 mm, nearly 93 percent of this is received between April-September. The rate of rainfall from 1986 to 1991 is presented below.

**Table 2.8**  
**Annual Rainfall (in mm)**

1986	-	3137 mm.
1987	-	4165 mm.
1988	-	5364 mm.
1989	-	3581 mm.
1990	-	3362 mm.
1991	-	3226 mm.

**Source :** *Industrial Growth Prospects in Cooch Behar District - A Study, Published by Cooch Behar Zilla Parishad, January 1996, p. 10*

### 2.3.3 Forest Resources

Forest happens to be an important natural resource of an economy. In addition, it is also a source of supply of economic products like wood, leaves, fruits, etc. Forest also plays an important role in soil conservation. Cooch Behar is very poor in respect of forest resources. The area under forest is about 1.67 percent of the total land area. However, the major forest produce include Teak, Sal, Sisu, Khair, Gammar etc. The production of fuel wood is negligible in the district. Since forest produce is negligible in the district, the revenue earning is also not that significant.

### 2.3.4 Mineral Resources

Compared to other neighbouring districts of North Bengal viz. Jalpaiguri and Darjeeling, the location of Cooch Behar is beyond the rocky clutches of Himalayan belt. The hard rock is completely absent in this area and therefore the district does not occupy any position in terms of major mineral deposits. Amongst minor minerals, mention may be made of river-bed boulders and brick clay. The brick clays are available in plenty which are used for manufacturing of roofing tiles, domestic potteries, and bricks. Cooch Behar is therefore not endowed favourably with the natural resources.

The district is relatively small in land area and relatively resource-poor as no large timber-tracts or hydel resources or mineral deposits occur. Tea, which is a major commercialising influence of the economics of some other North Bengal districts (like Jalpaiguri and Darjeeling) has not taken a foothold in Cooch Behar. The district is basically an agrarian one with low productivity and poor production conditions in agriculture.

## 2.4 Transport and Communication

The development of a place depends to a large extent on the good communication system. But Cooch Behar district is unluckily from the point of view of transport and communication. Existence of low level of transport facilities is another indicator of backwardness of the area.

The district of Cooch Behar is interoven with innumerable streams and rivers. Presence of these inserviceable streams and rivers has made it difficult to bridge them all wherever roads run over them. Besides the main roads, the district has no good all-weather roads. Many of the villages remain nearly isolated for lack of roads. Out of 1168 monzas, only 370 are connected by all-weather roads. The N.H.31 covers a short distance through the police stations of Cooch Behar and Tufanganj. The State High Way, 12A starts from Maynaguri and touches Changrabandha, Mathabhanga, Cooch Behar Sadar and Baneswar, Alipurduar in Jalpaiguri district. Besides the National and State Highways, there are metalled and unmetalled roads. The road transport service in the district and also in other districts of North Bengal, are provided largely by North Bengal State Transport Corporation (NBSTC) with head quater at Cooch Behar. The total length of roads maintained by different organisations is shown in the table below.

**Table 2.9**  
**Roads Maintained by Different Organisations in Cooch Behar**

Year	Road Maintained by						Total
	P.W.D.		Local Bodies		Municipalities		
	Surfaced	Unsurfaced	Surfaced	Unsurfaced	Surfaced	Unsurfaced	
1985-86	641.00	379.00	17.75	20.60	103.27	36.42	1196.04
1986-87	647.00	380.00	17.75	20.60	103.27	36.42	1205.04
1988-89	598.00	373.00	-	-	122.53	78.41	1171.94
1989-90	698.00	369.00	-	-	125.25	75.69	1267.94

**Source :** (1) *District Statistical Handbook, Cooch Behar, Series ; 1981, 1986-1989*

(2) *Key Statistics of Cooch Behar, 1989-90*

The District had a total length of 1267.94 km. of surfaced and unsurfaced roads in 1989-90 which represented only 6 percent increase since 1985-86. Total length of surfaced road was 762.02 km. in 1989-90 which recorded 8.3 percent increase since 1985-86 (Table 2.9).

The length of total surfaced road in Cooch Behar seems to be very low compared to that of Burdwan. Cooch Behar had 4.19 percent of the total surfaced road of West Bengal in 1988-89. The corresponding percentage for Burdwan in the same year was 10.05 percent. The lower percentage of surfaced road length in Cooch Behar indicates the backward transport and communication system in the district.

The railways are also inadequate in the district. The district has two types of railway tracks viz., broad gauge and metre gauge with a length of only 53 km. and 69 km. respectively. There are two broad gauge lines in the district. One covers New Jalpaiguri -Haldibari Section and the other, Calcutta-New Bongaigaon Section goes upto New Bongaigaon of Assam. The metre gauge line originates from

Alipurduar of Jalpaiguri District. This section of North-East Frontier Railways connects the main railway stations, Cooch Behar, New Cooch Behar and Dinhat in the extreme southern part of the district. There are 15 railway stations in the district. Besides the railways, the district has an air Communication with Calcutta but this service is irregular.

There are some deficiencies or bottlenecks in the existing network of transport in the districts of North Bengal including Cooch Behar. Some of the deficiencies may be noted as follows:<sup>6</sup>

(i) *Inadequate Road Infrastructure* : The network of roadways service in the district of Cooch Behar and also other districts of North Bengal is grossly inadequate. Per km. surfaced road in the district is required to serve more than 25000 persons. Taking North Bengal as a whole, per km. surfaced road is required to serve 21000 persons against the state average of 65000 persons.

(ii) *Lack of Rural-Urban Communication* : Due to the lack of surfaced rural roads in North Bengal, there is a little scope for interaction between rural and urban economies of North Bengal. At present there is only 400 km. of surfaced rural roads in entire North Bengal which constitute less than 10 percent of total length of surfaced roads (4921 km.). Out of the total rural surfaced roads in North Bengal, there is only 13 km. road in Darjeeling, 33 km. in Jalpaiguri, 44 km. in Cooch Behar, 101 km in Malda and 184 km. in West Dinajpur. A large number of villages, therefore, are not connected by roadways service. For example, out of 1168 village, only 370 are connected by roads in Cooch Behar leaving 595 villages in isolation. Due to the lack of adequate roads, transportation of agricultural products to the urban centres become difficult. The products of handloom industry of Cooch Behar suffer from lack of demand as because it is difficult to transport them to the urban markets in the absence of adequate roadways infrastructure.

(iii) *Inadequate Sub-Regional Integration* : The present system of integration between different sub-regions (district units) especially between Siliguri and Cooch Behar, and Jalpaiguri and Cooch Behar is grossly inadequate. Siliguri which is the gateway of North-eastern states is connected with Cooch Behar by N.H.-31. But the journey is troublesome and tedious as because it involves a long distance of about 225 kms. During the rainy season, the route becomes disrupted at several places and the vehicles have to cover additional distance. The same is true for communication with Jalpaiguri. Hence, the industrial units of Cooch Behar are to bear additional transportation costs.

(iv) *Poor Condition of Bridges* : The condition of bridges in the district of Cooch Behar and other districts of North Bengal is extremely poor. Most of the bridges in the area of wooden structure. In the rainy season when the flow of water in the rivers accelerates, a number of bridges are completely washed causing total disruption in the transport system of the district along the other districts of North Bengal.

(v) *Inadequate Rail Infrastructure* : Railways are also inadequate in the district of Cooch Behar. Total length of railway is only 127 kms in the district. North Bengal as whole have an aggregate length of 1000 kms. of railway tract.

## 2.5 Industry

The district of Cooch Behar is industrially backward too. In the absence of any medium or large-scale industry the district has been earmarked as "no industry district". The district enjoys certain subsidies and concessions as a classified backward area in the state of West Bengal. The industrial advancement in the small-scale sector is also very slow. This is mainly due to locational disadvantages and derth of other infrastructural facilities and inputs.

The process of industrialisation in the district is still in its infancy. Existing small-scale industries in the district are cold storage, sawing and planning of wood, manufacutre of ply wood chest for tea,

automobile servicing, printing presses, automobile repairs, grill and gates manufacturing, manufacture of bidi, etc. Besides, there is also a number of artisan oriented industries in the district which are handloom, sital pati, carpentry, etc.

The progress of small-scale industries in Cooch Behar is not comparable with the progress of these industries in Burdwan. The contribution of small-scale industries in terms of number of units and amount of employment generated is much higher in Burdwan than in Cooch Behar. The number of small-scale industrial units registered in Cooch Behar and Burdwan is shown in the following table.

**Table 2.10**  
**Number of Small-Scale Industrial Units Registered with the Directorate of Cottage and Small-Scale Industries with Corresponding Employment**

District	1982-83		1986-87		Upto 31.3.1990	
	Unit	Employment	Unit	Employment	Unit	Employment
Cooch Behar	242 (1.98)	2338 (2.39)	273 (1.17)	1289 (0.88)	5671 (1.68)	31278 (1.37)
Burdwan	1104 (9.06)	9276 (9.47)	2117 (9.37)	13203 (9.02)	28330 (8.38)	159355 (6.99)
West Bengal	12213	97.962	23228	146435	337941	2280857

Note : Figures in parentheses are percentages of Corresponding West Bengal figures.

Source : *Economic Review, Govt. of W.B 1986-87/1990-91*

From Table 2.10 it is seen that 242 small-scale industrial units were registered in Cooch Behar during the year 1982-83 and these units employed 2,338 persons. The corresponding figure for Burdwan in the same year was 1,104 units employing 12,213 persons. The table also reveals that Cooch Behar accounted for only 1.98 percent of the registered small-scale units in West Bengal compared to a figure of 9.06 percent for Burdwan in the same year. During the year 1986-87, the share of Cooch Behar in terms of number of units and employment both declined. If we consider the total number of small-scale industrial units registered upto 31.3.1990, it is found that Cooch Behar accounted for 1.68 percent, the corresponding figure for Burdwan being 8.38 percent. In terms of the number of persons employed, it is found that Cooch Behar accounted for 1.37 percent of total employment generated in small-scale industries in West Bengal, the corresponding figure of Burdwan being about 7 percent. It therefore appears that industrial advancement in the small-scale sector has been very slow in Cooch Behar and in fact, it remained almost stagnant. According to 1991 census, only 0.71 percent of population of the district are engaged in "household industry, manufacturing and repairing". This shows that only agriculture is important and industry is virtually non-existent in our study area.

The same picture is discernible if we consider the number of registered factories (excluding defence factories) in West Bengal by district. This is shown in the Table 2.11.

**Table 2.11**  
**Registered Working Factories (excluding Defence Factories) in West Bengal by District**

Year	Cooch Behar	Burdwan	West Bengal
1960	12(0.29)	189(4.62)	4039
1970	14(0.24)	270(4.81)	5612
1980	13(0.20)	367(5.72)	6412
1985	17(0.22)	464(5.90)	7864
1986	18(0.22)	477(5.92)	8064
1987	18(0.22)	491(5.88)	8348
1988	18(0.20)	492(5.74)	8573
1989	18(0.20)	508(5.80)	8746

Note : Figures in parentheses are percentages of corresponding West Bengal figures.

Source : *Economic Review, Govt. of West Bengal, 1988-89/1990-91*

It appears from Table 2.11 that while Cooch Behar accounts for a negligible portion (i.e. 0.20 percent) of the total registered factories in West Bengal in 1989, the corresponding figure of Burdwan is about 6 percent. This also reinforces our earlier observation that modern industries are almost non-existent in our study area.

We have noted earlier that Cooch Behar is one of the backward districts in the state of West Bengal. Owing to its industrial backwardness, the economy of the district is mainly dependent upon agricultural activities. But agriculture of the district is characterised by poor production condition and low productivity. Economic condition of majority of the population of the area, therefore, remain very poor.

### 2.5.1 Consumption of Electricity

There is no two opinion about the importance of power for the economic, particularly industrial development of a region. No modern industries can run without power. The district of Cooch Behar receives its power supply from Chukha Hydel power of Bhutan and Jaldhaka Hydel project. The consumption of power in the districts of North Bengal, particularly in Cooch Behar is very poor and substantially lower than the state and national average. The low consumption of electricity for productive activities indicates the nature of poor development of the area. The total consumption of electricity in the districts of North Bengal and Burdwan is given in Table 2.12.

**Table 2.12**  
**District-wise Consumption of Electricity in**  
**West Bengal (1988-1989)**

District	Total Consumption of Electricity (in million KWH)
Cooch Behar	17.6
Jalpaiguri	82.7
Darjeeling	108.4
Malda	47.5
West Dinajpur	34.1
Burdwan	1881.1
West Bengal	8130.4

Source : *Economic Review, 1990-1991*

It is seen from the table that Darjeeling district has the highest consumption of electricity of 108.4 million KWH and Cooch Behar has the lowest consumption of electricity of 17.6 million KWH in North Bengal. It is also evident that the consumption of electricity in Burdwan in 1988-89 was almost 107 times greater than that in Cooch Behar. In fact, the district of Burdwan alone surpasses all North Bengal districts together in respect of consumption of electricity. In the year 1988-89 North Bengal as a whole consumed 280.3 million KWH of electricity, whereas the corresponding figure for the southern districts of Bengal was 7850.1 million KWH. Further, the districts of North Bengal consume major portion of electricity for domestic purposes and very little for industrial activities. For example, 0.84 percent of the total consumption of electricity was utilised for irrigation purposes, and 32 percent for industrial purposes in Cooch Behar compared to 32.79 percent use of electricity for domestic purposes alone. The low consumption of electricity for productive purposes indicates the backwardness of the whole region.

## 2.6 Agriculture

### 2.6.1 Agrarian Structure

Cooch Behar is predominantly an agrarian economy. 93 percent of its population live in rural areas. In the absence of any medium or large-scale industry in the district, a vast majority of its working population has to depend on agriculture for its livelihood. 74.22 percent of the main workers in

Cooch Behar belongs to agricultural sector - 48.18 percent consists of cultivators and 24.04 percent comprise of agricultural labourers. Cooch Behar is however dominated by small and marginal farmers operating less than 2 hectares of land. 78.38 percent of the operational holdings in Cooch Behar are less than 2 hectares. The average size of holdings is 0.87 hectares as against 0.95 hectare for whole of West Bengal. In the absence of a class of really 'large' cultivators the agrarian economy of the district can largely be described as a peasant economy. The following tables will give some idea on the position of the farmers of this district.

**Table 2.13 a**  
**Distribution of Holdings**

Size of Holdings	No. of Holdings (in '000 Nos)	% of Total Holdings
Upto 1.00 hec	138.5	51.99
Above 1.00 & below 2.00 hec.	70.3	26.39
Above 2.00 & below 4.00 hec.	32.5	12.20
Above 4.00 hec.	25.1	9.42
Total	266.4	100%

**Table 2.13 b**  
**Tenancy Arrangement**

Total Nos. Bargadars	: 1,30,762
Total Nos. of Pattaholders	: 1,12,380
Total Nos. of Landless persons	: 40,971
Total Nos. of Small Farmers	: 86,388
Total Nos. of Marginal Farmers	: 1,97,910
Total Nos. of Agricultural Labourers	: 1,39,914

Female Ownership is 16.02%

Source : *Census of India , 1981*

Cooch Behar "did not have a class of landless agricultural labour as in other districts. Each cultivating family had at least some land for itself and in addition served on the lands of the nearby *jotedar* or bigger cultivator. With the influx of a large number of migrants since 1950-51 a small class of labour has grown up."<sup>7</sup> Sharecropping was the dominant form of cultivation in some places of Cooch Behar in the past. But in recent years there has been a tendency to withdraw lands from the share-croppers for self-cultivation. Consequently, we find a large number of owner cultivators now-a-days. Seasonal tenancy is seen to have been gaining popularity in recent years . These changes in the system of cultivation is, perhaps, the result of the new tenancy laws introduced by the Left Front Government which allows the tenant to record in his name the tenanted portion of land.

The main features of agriculture in Cooch Behar have been discussed here under the following heads : (a) land-use pattern, (b) cropping pattern, and (c) production trends and productivity.

### 2.6.2 Land-Use Pattern

One of the important aspects of agriculture is the pattern of land utilisation. It actually means the use and distribution of available land for different purposes. The following table shows the land-use pattern of the district of Cooch Behar for the year 1990-91.

**Table 2.14**  
**Land Utilisation Pattern of Cooch Behar District (1990-91)**

Category	Area (Ha)	Percentage to Total Geographical Area
1. Geographical Area	3,38,713	100%
2. Area Under Non-agricultural Use	69,137	20.41%
3. Forests	5,646	1.67%
4. Barren and Uncultivable Land	14,277	4.21%
5. Permanent Pastures and Other Grazing Land	181	0.05%
6. Area Under Orchard, Plantation and Miscellaneous	10,340	3.05%
7. Cultivable Waste Land	3,332	0.98%
8. Fallow and Other Current Fallow	1,582	0.46%
9. Current Fallow	-	-
10. Net Area Available for Cultivation	2,30,391	68.02%
11. Area Sown More Than Once	2,24,609	66.31%
12. Grossed Cropped Area	4,55,000	134.33%
13. Cropping Intensity (%)	-	197.50

Source : *Annual Plan on Agriculture (1990-91), Cooch Behar*

The land-use pattern of the district clearly reveals that (Table 2.14) the scope for extension of cultivation is not much. The district has already brought under plough 2,30,391 hectares of land which comprise 68.02 percent of the geographical area of the district. Very negligible percentage of land (1.67) is under forest.

The cropping intensity for different districts of North Bengal can be compared favourably with the state of West Bengal. It is highest in Cooch Behar and lowest in Malda among the five districts of North Bengal. Table 2.15 shows the district-wise cropping intensity in North Bengal.

**Table 2.15**  
**Cropping Intensity in North Bengal Districts**

District	Net area available for cultivation	Gross Cropped Area(Ha)	Cropping Intensity ( in Percentage)
Cooch Behar	230391	452358	196
Jalpaiguri	225676	400169	179
Darjeeling	66871	112476.40	168
West Dinajpur	395984	609796	153
Malda	280850	414838	148

Source : *Conference on Regional Development of North Bengal : Prospect & Potential Background paper, 1986, Govt. of West Bengal, p. 32*

The above table shows that the cropping intensity in the district of Cooch Behar is fairly high. Relatively high rainfall and low monthly potential evapo-transpiration (because of high humidity)

constitute towards retaining the favourable trend. Moreover, soil moisture is contained for a considerable period even after the departure of monsoon. Despite this high cropping intensity in the district of Cooch Behar, productivity indices are much lower than the state average.

### 2.6.3 Cropping Pattern

There are mainly three crop-seasons in the district, namely, *pre-kharif* (March - June), *kharif* (June-September) and *Rabi* (October - January). The main crops of the district are Aus paddy and jute in the pre-kharif season. Aman paddy during kharif season and in the Rabi season tobacco, oil seeds, pulses and wheat are grown. Boro paddy (February-May) is a new introduction in the cropping-matrix of the district since it was previously a marginal crop in the marshlands or *bill*. The district is the major tobacco growing area of the state. It has the potentiality of growing one of the best quality Cigar wrapper and filter tobacco. Unfortunately, for want of near-by market, the extension of area for this crop is not possible. During recent years the district has made some progress in the cultivation of winter vegetables, specially cauliflower, cabbage, and items like potato and hybrid tomato, the produce of which has captured the markets of Assam and Meghalaya. The following table highlights the area under principal crops in the district of Cooch Behar in different years.

**Table 2.16**  
**Area Under Principal Crops in Cooch Behar**

Crop	(Area Thousand Hectares)					
	1981-82	1985-86	1986-87	1987-88	1988-89	1989-90
Aus (Rice)	62.2	61.2	64.8	61.4	96.1	86.9
Aman (Rice)	193.7	195.4	225.0	191.5	229.9	222.6
Boro (Rice)	0.1	0.4	2.2	5.2	8.7	9.2
Wheat	8.0	14.0	33.5	34.8	21.7	23.4
Gram	(a)	-	-	-	-	-
Other Pulses	6.4	7.8	11.7	9.2	9.1	10.6
Rape and Mustard	6.9	4.5	7.5	6.5	7.7	6.8
Jute (1)	54.0	76.1	60.4	56.8	55.2	59.6
Sugarcane(2)	0.1	(a)	-	-	(a)	(a)
Potato	1.8	3.1	9.5	4.1	3.9	4.6
Tobacco	9.4	10.0	9.8	9.8	13.2	-

**Sources :** (1) *District Statistical Handbook, Cooch Behar Series : 1981, 1986-1989*  
(2) *Key Statistics, Cooch Behar, 1989-90*

**Note :** (1) Production items of 100 bales  
(2) Production items of gur  
(3) Less than 50 hectares

Table 2.16 discloses increasing preponderance of food crops. The entire agricultural economy largely depends on paddy, wheat, jute, tobacco and potato. Aman paddy is the most important crop of the district. Although the area under Boro paddy is not very significant, yet it is increasing steadily. During the years wheat has emerged as an important crop of the district. While the proportion of area under Jute (cash crop) seems to have been declining, the proportion of area under potato (a commercial crop) have an increasing trend.

### 2.6.4 Production Trends and Productivity

A comparison of the production and productivity trends of the district of Cooch Behar with those of the district of Burdwan clearly reflects the backwardness of our study area. Burdwan is agriculturally the most advanced district of West Bengal. The production and productivity indices of Burdwan are much higher than the corresponding state averages. But in case of Cooch Behar, these indices are substantially lower than the corresponding figures of Burdwan and West Bengal. The following table presents a comparison of the index number of area, production and productivity of Cooch Behar, Burdwan and West Bengal.

**Table 2.17**  
**Index Numbers of Agricultural Area, Production and Productivity of Land**  
**for All Crops in Cooch Behar, Burdwan and West Bengal (Base: 1971-72=100)**

Year	Area			Production			Productivity		
	Cooch Behar	Burdwan	West Bengal	Cooch Behar	Burdwan	West Bengal	Cooch Behar	Burdwan	West Bengal
1976-77	119.29	105.32	104.13	101.79	114.90	105.11	85.33	109.10	100.11
1981-82	108.53	107.36	102.59	97.25	116.80	103.84	89.61	108.79	101.22
1982-83	110.94	94.91	96.35	94.24	119.00	84.95	84.95	125.38	99.78
1984-85	116.23	126.04	104.13	112.84	163.68	97.08	97.08	141.05	135.14
1985-86	112.99	114.87	105.07	110.89	153.15	98.14	98.14	133.32	138.12
1986-87	130.52	110.25	108.12	124.99	171.53	95.76	95.76	155.58	136.90
1987-88	113.41	123.25	109.85	117.12	196.38	103.27	103.27	159.33	144.81
1988-89	128.44	116.34	108.75	143.07	213.71	177.25	111.39	183.69	162.99
1989-90	124.38	116.57	109.80	146.97	207.62	182.96	118.16	178.11	166.63

Sources : (1) *Economic Review 1986-87*, p. 38  
(2) *Economic Review 1990-91*, p. 44

It appears from Table 2.17 that the index numbers of agricultural production and productivity in the district of Cooch Behar remains much lower compared to those of Burdwan and the state of West Bengal. While the production index for Cooch Behar has increased by 45 points from 1976-77 to 1989-90, it has increased by 93 points for Burdwan and 77 points for the state during the same period. Similarly, productivity index for Cooch Behar has increased by 33 points, compared to an increase of 69 points in Burdwan and 66 points increase in the state during the same period. In both terms therefore Cooch Behar is backward.

#### 2.6.5 State of Irrigation

The volume of agricultural production depends very much on the irrigation system of the area. Irrigation facilities, though an essential pre-requisite for agricultural progress, are very much limited in the district of Cooch Behar. The main source of making water available for agricultural fields is natural rainfall, which is marked by divergence in quantity, time and continuity.

Irrigation facilities at present are inadequate. At the time of field investigation (1990-91) only 11.72 percent of the net cultivated area was under irrigation. In the absence of any major irrigation projects in the district, farmers depend on minor-irrigation schemes. The types of irrigation facilities available in the area are: Tanks, RLIs, STWs, DTWs, Hand Tube Well and Dug Well (pucca). The following table presents the area irrigated by different sources in the district of Cooch Behar for a period of 10 years.

**Table 2.18**  
**Area Irrigated by Different Sources in the District of Cooch Behar**

Year	Area Irrigated by				Deep Tube Well, Shallow Tube Well & Rivers Lift Pump	Other Sources	Total Area Irrigated
	Govt. Canals	Private Canal	Tank	Well			
1981-82	0.25	-	1.40	-	12.50	22.20	36.35
1985-86	-	-	-	-	140.93	-	140.93
1986-87	-	-	-	-	150.88	-	150.88
1987-88	-	-	-	-	129.23	-	129.23
1988-89	-	-	-	-	221.05	-	221.05
1989-90	-	-	-	-	210.60	-	210.60

Sources : (1) *District Statistical Handbook, Cooch Behar, Series : 1981, 1986-1989*  
(2) *Key Statistics of Cooch Behar, 1989-90*

The district has got a rich deposit of ground-water. But in the absence of any proper net-work of irrigational facility, the vast amount of ground-water resource remain untapped in the district. The main utilisation of ground-water in the district is for agriculture apart from the very small percentage that represents domestic drawals. However, "Utilisation of ground-water for agriculture and irrigation has not attained its optimum level in any part of the district.... considering the appreciable amount of recharge received annually through rainfall, the withdrawal of ground-water has been negligible which leaves a tremendous scope for further large-scale development of water".<sup>8</sup>

The potential available in the district for irrigation is of the order 1,447.40 MCM, while the total ground-water available for development is about 1,851.22 MCM.<sup>9</sup> In view of this large available resource of ground-water, it is useful to develop some idea of the order to which it has been harnesses for development. There is a good scope for utilisation of ground-water through the spread of irrigational facilities in the district. "With the increased irrigation potential, the farmers in the district should be encouraged and persuaded to resort to multiple-cropping pattern through assured irrigation, which in turn would result in the up-grading of the economic status of the people and the district as a whole".<sup>10</sup> But unfortunately, the irrigation facilities at present are not adequate to meet the growing demand of agriculture. The following table gives the distribution of ground-water structures and draft in the district of Cooch Behar in 1988.

**Table : 2.19**  
**Distribution of Ground Water Structures and Draft in Cooch Behar,**  
**November (1988)**

Deep Tube Wells	Minideep Tube Wells	No. of Shallow Tube Wells				No. of Dug Wells			Not in Use Permanently	Total Annual Draft from Ground Water (M.C.M)	
		Electrical	Diesel	Manual F. P.	Other	Total	Mech.	Manual			Total
51		245	8218	2730	138	11331	15	3812	3827	64	164.01

N.B. : F.P. = Fitter Points

M.C.M. = Million Cubic Metres

Source : *Key Statistics of Cooch Behar, 1993*

It appears from Table 2.19 that irrigation development in the district has been slow and not even 10 percent of the available ground-water in the district is being utilised, in the absence of major irrigation schemes. Exploitation of this ground-water reserves appears to be the only way that can quicken economic development of the area. In this regard, the importance of government-operated RLIs and STWs is paramount. The following table shows the distribution of govt. DTWs, RLIs and STWs in Cooch Behar, Burdwan and West Bengal.

**Table 2.20**  
**Distribution of Govt. Deep Tube Wells, River Lifting Irrigation and Shallow Tube Wells in**  
**Cooch Behar, Burdwan, and WB (as on 31st March, 1988)**

Cooch Behar			Burdwan			West Bengal		
DTW Total Nos.	STW Total Nos.	RLI Total Nos.	DTW Total Nos.	STW Total Nos.	RLI Total Nos.	DTW Total Nos.	STW Total Nos.	RLI Total Nos.
15 (0.59)	90 (2.69)	88 (2.75)	332 (12.99)	408 (12.21)	266 (8.32)	2554 (100.00)	3342 (100.00)	3198 (100.00)

Source : *Economic Review 1988-89*

It appears from the above table that the importance of the three government-operated minor irrigation schemes is very small in the district of Cooch Behar compared to Burdwan. Cooch Behar accounts for only 0.59 percent of DTWs of West Bengal in 1988, the corresponding figure for Burdwan is 12.99 percent. In case of STWs, the share of Cooch Behar is only 2.69 percent, compared to 12.21 percent share for Burdwan. In case of RLIs, the share of Cooch Behar is 2.75 percent only, whereas the share of Burdwan is 8.32 percent. Therefore compared to Burdwan the government-operated irrigation facilities seem to be lower in Cooch Behar substantially.

All other technological inputs like HYV seeds, chemical fertilizers, etc. can only be used if water input is available sufficiently. The poor irrigation facility in the district appears to be one of the most important factors impeding agricultural development.

## 2.6.6 Fertilizer Consumption

Cooch Behar is predominantly an agrarian economy. But still now the agriculture in the district remains at a primitive level with low level of productivity. The low productivity can largely be attributed to the low consumption of fertilizer and low level of irrigation facilities in the area. For successful implementation of HYV Programme, the use of chemical fertilizer acts as a catalytic agent. But the consumption of fertilizer is very insignificant and plays a very negligible role in the agriculture of Cooch Behar. The following table shows per hectare fertilizer consumption of the district of Cooch Behar for the years 1984-85 to 1988-89.

**Table 2.21**  
**Consumption of Fertilizer in Cooch Behar**

Year	Name of the Fertilizer (in tonnes)			Total (N+P+K)	Fertilizer Consumption (kg/ha)
	N	P	K		
1984-85	6690	3986	2960	13636	27.75
1985-86	7170	3772	2863	13805	28.11
1986-87	9567	5037	3583	18187	37.03
1987-88	12755	5519	3893	22167	45.15
1988-89	14335	7714	5535	27584	56.20

Source : Annual Plan on Agriculture (1990-91), Cooch Behar, p. 25

It is observed that (Table 2.21) the fertilizer consumption per hectare area in the district was 27.75 kg. in the year 1984-85 which rose to 56.20 kg in 1988-89. During a period of 4 years, fertilizer consumption in the district was therefore doubled. However, a comparison of per hectare fertilizer consumption in the five districts of North Bengal in 1988-89 with that of the district of Burdwan and the state of West Bengal reveals an extremely poor position of Cooch Behar in this respect. Such a comparison is made in the following table.

**Table 2.22**  
**Consumption of Fertilizers in North Bengal Districts and Burdwan (1988-89)**

District	Name of the Fertilizers (in tonnes)			Total (N+P+K)	Fertilizer Consumption (kg/ha)
	N	P	K		
Darjeeling	4437	3310	2451	10198	89.6
Jalpaiguri	9565	5798	4425	19788	49.76
Cooch Behar	14335	7714	5537	27584	56.20
W.Dinajpur	21055	8265	6697	36017	51.60
Malda	20547	9024	7931	37502	79.10
Burdwan	45949	16534	10133	72616	100.80
West Bengal	370925	164205	115578	650708	79.00

Source : Annual Plan on Agriculture (1990-90), Cooch Behar, p. 25

It appears from Table 2.22 that all North Bengal districts are lagging behind Burdwan, which is agriculturally the most developed district in West Bengal, in respect of per hectare consumption of chemical fertilizer. The per hectare consumption of fertilizer in Cooch Behar, in particular, is substantially lower than that of Burdwan and of the state of West Bengal. The low consumption of chemical fertilizer reflects the backward nature of agriculture in the district of Cooch Behar.

The backward nature of agriculture is attributable to the agrarian structure of the economy. Since a vast majority of cultivators in Cooch Behar are small and marginal farmers, their ability to invest for agricultural development is quite limited. The problem is further compounded by their limited access to formal credit institutions of which we discuss now.

## 2.7 Rural Credit Situation

Rural Credit market is of two types -organised and unorganised. Within the organised credit sector we have a number of formal lending institutions such as Primary Agricultural Credit Societies (PACs), Commercial Banks and Co-operative Banks which provide working capital for agricultural operations. Unorganised or informal credit sector on the other hand includes a large number of private sources such as landlords, larger cultivators, neighbours, professional money-lenders, traders, friends and relatives, and others. The features and relative importance of lending from formal and informal credit-sources in the district of Cooch Behar may now be discussed.

Looking first at the formal credit-sources we observe that the Primary Agricultural Credit Societies (PACs) are the credit institutions at the grassroots level. At the end of June 1985 there were 221 PACs in Cooch Behar with a total working capital of Rs. 721 lac and total membership of 93 thousand. The number of PACs however increased to 224 at the end of June 1989 although total membership had declined to 89 thousand and working capital to Rs. 683 lac.<sup>11</sup> The performance of the PACs has therefore not been satisfactory in the district.

Co-operative Bank in the district is of two types - West Bengal State Co-operative Bank (WBSCB) with its 3 branches and Land Development Bank (LDB) with 6 branch offices in Cooch Behar. The WBSCB provide short-term loans for agricultural operations. The total loan sanctioned by the bank in the agricultural sector in 1987-88 was Rs. 69.02 lacs against which the collection was only 26.81 percent. There is thus an acute problem of outstanding loans in this institution. Land Development Bank (LDB) on the other hand provides long-term loans for reclamation of land, construction of ring-wells or cattleshed, redemption of old debts, purchase of agricultural implements like pump-set, power-tiller, tractor, sinking shallow-tubewells, etc. The bank is mainly financed by NABARD. The LDB had advanced Rs. 85.22 lacs in 1977-78 which gradually declined to Rs.0.19 lac in 1982-83. The bad recovery condition of loan has been primarily responsible for such decline in loan advanced. It may be noted that only 7.12 percent of loan advanced by the institution was collected during 1986-87.<sup>12</sup>

Despite a rapid branch expansion of the commercial banks in recent years, its effect in terms of population coverage has not been adequate.

**Table 2.23**  
**Number of Bank Offices and the Number of Population per Bank in the districts of Cooch Behar, Burdwan and West Bengal**

District	Number of Offices		Population Per Bank (inThousand)	
	As on 1981	As on 1990	As on1981	As on1990
Cooch Behar	40 (1.79)	101 (2.46)	44	21
Best District	184 (8.24)	356 (8.69)	26	16
State	2233 (100.00)	4097 (100.00)	21	16

Source : *Economic Review 1990-91*

Table 2.23 shows that of the total number of bank offices in the state of West Bengal, Cooch Behar uniformly accounts for a very low percentage compared to the most agriculturally advanced district of Burdwan. However, whereas the differential increase in the number of branches in Burdwan over the period of 1981-90 has raised its percentage proportion by 0.45 points, in the case of Cooch Behar the rate of branch-expansion has been faster at 0.67 percentage points. Thus some effort to make up the backlog in spread of bank services is evident. In terms of population coverage, the effect of this expansion has not been sufficient to cover the backlog, since although coverage in Cooch Behar has improved, the district still lags considerably behind Burdwan which has figures consistently closer to the average in the state.

We now consider the distribution of bank-branches as well as deposits and advances over the rural and urban areas.

**Table 2.24**  
**Distribution of Deposits and Advances of Scheduled Commercial Banks**

District	No. of Offices	Rural			Urban			
		Deposit	Advance	Advance-Deposit Ratio	Deposit	Advance	Advance-Deposit Ratio	
Cooch Behar	59	4293	1793	41.77	23	4012	1826	45.51
Burdwan	194	16472	4653	28.25	44	20362	3501	17.19
State	1768	123916	50643	40.87	581	164649	39707	24.12

Note : Urban = Semi-urban + Urban + Metropolitan

Source : *Economic Review 1990-91*

Table 2.24 reveals that about 72 percent of the total bank branches in Cooch Behar are situated in rural areas, whereas it is 58 percent in Burdwan and 48 percent in the state of West Bengal as a whole. With a very high proportion of rural branches in Cooch Behar, a lower advance-deposit ratio in the rural areas reflects policies of urban-bias resorted to by the commercial banks in the district. However, the advance-deposit ratio in the rural areas of the district is much higher than that of Burdwan and it is consistent with the state average. But this apparent favourable situation may not reflect the actual availability of institutional credit to the poorer section of the peasantry.

In the absence of recent data relating to class-wise distribution of formal credit among the cultivator households, we have to depend on the results obtained from our field investigation which however reveal restricted access of the poorer sections to the formal credit institutions (see Table 3.4 & Table 4.7). We have noted earlier that the district of Cooch Behar is dominated largely by sub-marginal, marginal and small cultivators who are generally seen to pursue subsistence agriculture. Since a vast majority of cultivators are poor, their ability to invest for agricultural development is quite limited. Moreover, their access to formal credit institutions is further restricted because of asset-based lending policy pursued by the lending institutions. Lack of adequate institutional credit in the peasant economic system has therefore been primarily responsible for the perpetuation of agricultural backwardness in the district.

In the absence of adequate institutional credit in the study region, the cultivators very often depend on informal (private) sources for production and consumption loans. A section of private lenders in the study region are seen to advance credit with a view to interlocking the labour services or output of the borrowers. In a number of cases such interlocking arrangements enhance surplus extraction from the village economy and have been responsible for relative impoverishment of the rural community.

## 2.8 A Backward District

It therefore appears from the foregoing analysis that agriculture is the primary occupation in the backward 'no industry' district of Cooch Behar in North Bengal. Because of the high dependence of the

regional economy and the population on agriculture and the high intensity of cultivation, the agrarian features of the district are characterised by peasant economy, since both average size of holding as well as proportion of landless agricultural labourers are small.

Irrigation facilities are very limited in the district. The application of chemical fertilizers and pesticides and the use of HYV seeds is also very low compared to Burdwan which is agriculturally the most advanced district in West Bengal and the state average. Poor irrigation facilities along with low levels of consumption of fertilizer and other inputs is responsible, in part, for the low level of agricultural productivity in the district. Since a vast majority of cultivators are poor, their capacity to invest for agricultural development is quite limited. Lack of adequate institutional credit in the peasant economic system has also been responsible for the perpetuation of agricultural backwardness in the district.

The backwardness of the district is also revealed by the poor infrastructural facilities in the area. Transport and Communication systems are inadequate, educational facilities are not sufficiently advanced. Consumption of electricity for productive purposes is also very low. The lack of infrastructural facilities is responsible for the retardation of industrial growth in the area. The scope of employment outside agriculture is therefore very limited.

We therefore observe that the economy of the district of Cooch Behar is backward on all fronts, an observation further strengthened by the fact that HDI for the district of Cooch Behar is the lowest among all the districts in West Bengal. Since the purpose of the present study is to investigate the nature and extent of interlinkages in the context of a poor agrarian economy, Cooch Behar provides an ideal territory for field investigation.

### References

1. *Annual Plan on Agriculture (1986-87), Cooch Behar*, Principal Agricultural Office, p. 1
2. Mitra, A. (1953) : *District Handbook - Census 1951, Cooch Behar District*, West Bengal, Calcutta, pp. XXXVI-XXXVIII
3. Majumder, D.D. (1977) : *West Bengal District Gazetteers, Koch Bihar*, West Bengal Government Press, p. 50
4. Chakrabarti, H.K. (1988) : 'North Bengal in Profile', in *Souveneir, Bangiya Arthanity Parisad*, March, 25-27
5. *Statistical Abstract, West Bengal, 1978-89 (combined)*
6. Haldar, D.K. (1987) : *Transport Infrastructure, North Bengal Industrial Prospects and Policies (Draft)*, Jadavpur University, pp. 99-100
7. *Op.Cit*, Majumder, D.D., p. 153
8. *Ibid.*, p. 11
9. *Technical Report (1983)*, Series : d No. 33, Central Ground Water Board, p. 13
10. *Ibid.*, p. 16
11. *Economic Review 1986-87/1990-91*, West Bengal
12. Official Records, Land Development Bank, Cooch Behar

## AGRARIAN INTERLINKAGES AMONG OWNER CULTIVATORS

### 3.1 Introduction

This chapter presents an analysis of different interlinkages formed among the 184 *pure owner-cultivators* included in our sample. In the present study, pure owner-cultivators have been defined as cultivators who operate entirely on self-operated pieces of land. Lease-Ratio ( $L_r$ ) i.e. the proportion of leased - in land in the total area operated by them is, therefore, zero.

Although, theoretically, interlinkages may be of various types, those most commonly observed are those involving the informal (agrarian) credit market to the labour market and the market for output. Since the access of poor borrowers to the formal credit market is limited, they depend on informal sources for financing consumption needs as well as productive activities, which heightens the possibility of involvement in interlinked transactions in the informal credit market. The basic issues to be analysed in this chapter are therefore two-fold : (a) to identify the groups of borrowers who are involved in interlinked transactions and (b) to examine the extent of exploitation if any, in linked borrowing as contrasted to non-linked borrowing.

With this in mind, an attempt has been made in the chapter to evaluate the actual access of the pure owners to formal and informal credit markets. We have examined various types and sources of informal loans and the way in which informal loans give rise to different types of interlinkages. We have presented the methodology for the calculation of the implicit / explicit interest involved in interlinked transactions and finally, the comparison of rates of interest between linked and non-linked borrowings has been made to assess the impact of such linkages on the study area that is characterised by prevalence of the peasant- subsistence mode of cultivation.

### 3.2 Socio-Economic Status of Pure Owners

To understand the socio-economic position of the pure owners, analysis might first be made of the distribution of their ownership holdings, which would reveal the position occupied by these households in the landowning hierarchy. The landholding distribution of the pure owners has been shown in Table 3.1. The majority i.e. above 70 percent of households in Region-I are seen to belong to ownership classes of less than 5.01 acres, and in Region-II this percentage rises to 76.54 percent. Our study area therefore characterises a small peasant-oriented agrarian economy dominated by sub-marginal (ownership class : 0.01-1.25), marginal (1.26-2.50) and small (2.51-5.00) cultivators . Even the medium (5.01 - 7.00) and large (7.51 & above) cultivators in the study area are not rich cultivators in the relative sense. The average ownership holdings among each class is relatively small. The average area owned over all ownership categories in Region-I is 3.81 acres compared to 3.02 acres for Region-II.

**Table 3.1**  
**Size Group Distribution of Ownership Holdings of Pure Owners**

Region	Size Group (in acres)	Number of Households	Owned Area	Average Area
I	0.01 - 1.25	24 (23.30)	17.28 (4.40)	0.72
	1.26 - 2.50	21 (20.39)	40.74(10.37)	1.94
	2.51 - 5.00	29 (28.16)	110.78(28.21)	3.84
	5.01-7.50	16(15.53)	102.08(26.00)	6.38
	7.51 & above	13(12.62)	121.81(31.02)	9.37
	Total	103(100.00)	392.69(100.00)	3.81
II	0.01-1.25	23(28.39)	15.64(6.38)	0.68
	1.26-2.50	18(22.22)	28.44(11.60)	1.58
	2.51-5.00	21(25.93)	72.45(29.57)	3.45
	5.01-7.50	11(13.58)	62.92(25.68)	5.72
	7.51 & above	8(9.88)	65.60(26.77)	8.20
	Total	81(100.00)	245.05(100.00)	3.02

*Note : Figures in parentheses are percentages to total.*

**Source : Field Investigation**

It is also seen from the above table that sub-marginal, marginal and small cultivators together (belonging to the size-groups of less than 5<sup>01</sup> acres) form 72 percent of the cultivators in Region-I but own only 42 percent of land. Cultivators belonging to the same size-groups in Region-II form about 76 percent of cultivators but own 36 percent of land only.

Some idea about the social status of the cultivators may be obtained by considering their caste/community-wise distribution and levels of education as given in the table below.

**Table : 3.2**  
**Distribution of Pure Owners According to Caste / Community by Size Group of Holding**

Region	Size Group (in acres)	Number of Households	Scheduled Caste	Moham -medan	Upper Caste
I	0.01-1.25	24	15(62.50)	7(29.17)	2(08.33)
	1.26-2.50	21	14(66.67)	4(19.04)	3(14.29)
	2.51-5.00	29	20(68.97)	2(06.90)	7(24.13)
	2.51-7.50	16	9(56.25)	1(06.25)	6(37.50)
	7.51 & above	13	11(84.62)	0(00.00)	2(15.38)
	Region Sub-total	103	69(66.99)	14(13.59)	20(19.42)
II	0.01-1.25	23	15(65.05)	8(34.78)	0(00.00)
	1.26-2.50	18	9(50.00)	5(27.78)	4(22.22)
	2.51-5.00	21	8(38.09)	4(19.05)	9(42.86)
	5.01-7.50	11	4(36.36)	1(09.09)	6(54.55)
	7.51 & above	8	4(50.00)	0(00.00)	4(50.00)
	Region Sub-total	81	40(49.38)	18(22.22)	23(28.40)
Total Sample		184	109(59.24)	32(17.39)	43(23.37)

*Note : Figures in parentheses are percentages of row totals.*

**Sources : Field Investigation**

Table 3.2 reveals that the dominant proportion i.e. 59.24 percent of owner cultivators belong to the Hindu Scheduled Castes (SC), 17.39 percent are Muslim and 23.37 percent are from the Hindu Upper Castes. The table therefore shows the degree of dominance of the Scheduled Castes within the cultivation

community of our study region. The percentage of SC population is higher for both regions at the largest size-group of ownership holding. The percentage of owner cultivators belonging to upper castes is also seen to increase with the size of ownership holding. However, the percentage of muslims among the owner cultivators behaves oppositely and declines with the size of ownership holding.

It needs however to be noted that the character of the SC population among the owner cultivators and over the district as a whole defines the agrarian economy of the study region as being intrinsically different from other parts of the state in the sense that the Cooch Behar SCs are much more homegenised than the SCs in other parts of West Bengal. Whereas the Scheduled Castes over most of India comprise several occupational castes placed in low scale on the caste-hierarchy, the Cooch Behar Scheduled Castes almost entirely comprise the indogenous Rajbanshi Community.

We now distribute the sample pure owner-cultivators accordingly to their level of education in Table 3.3.

**Table 3.3**  
**Distribution of Pure Owners According to Size Group of Holding and Educational Level**

Region	Size Group (in acres)	Number of Households	Illiterate	Upto Primary	Above Primary & Below middle	Upto Secondary	Upto Graduate
I	0.01-1.25	24	17(70.83)	6(25.00)	1(04.17)	0(00.00)	0(00.00)
	1.26-2.50	21	12(57.14)	2(09.52)	6(28.58)	1(04.76)	0(00.00)
	2.51-5.00	29	10(34.48)	5(17.25)	11(37.93)	3(10.34)	0(00.00)
	5.01-7.50	16	3(18.75)	1(06.25)	7(43.75)	3(18.75)	2(12.50)
	7.51& above	13	1(07.69)	0(00.00)	3(23.08)	5(38.46)	4(30.77)
	Region Sub-total	103	43(41.76)	14(13.59)	27(26.21)	13(12.62)	6(05.82)
II	0.01-1.25	23	19(82.61)	4(17.39)	0(00.00)	0(00.00)	0(00.00)
	1.26-2.50	18	12(66.66)	4(22.22)	1(05.56)	1(05.56)	0(00.00)
	2.51-5.00	21	7(33.33)	7(33.33)	5(23.82)	2(09.52)	0(00.00)
	5.01-7.50	11	2(18.18)	2(18.18)	6(54.55)	0(00.00)	1(09.09)
	7.51& above	8	2(25.00)	1(12.50)	3(37.50)	1(12.50)	1(12.50)
	Region Sub-total	81	42(51.85)	18(22.22)	15(18.52)	4(04.93)	2(02.46)
Total Sample		184	85(46.19)	32(17.39)	42(22.83)	17(09.24)	8(04.35)

*Note : Figures in parentheses are percentages of row totals.*

**Source : Field Investigation**

It is revealed from Table 3.3 that the levels of absolute illiteracy are highest among sub-marginal cultivators (0.01-1.25) but generally falls with the size of landholding. There is also some increase in higher education with the size of landholding in both regions.

Evaluating the aggregated sample of owner cultivators in terms of the socioeconomic indicators, it is noticed again that the overwhelming majority of cultivators fall within medium holding or less, with nearly equal representation among sub-marginal/marginal and small/medium sub-groups. Thus large holdings are largely absent. A similar clustering over size-classes also exists among SC owner cultivators. However, muslim owner cultivators tend to concentrate among the sub-marginal/marginal ownership class while upper caste tend to concentrate among the largest size-cluster. Keeping in mind that the SC (Rajbanshi) cultivators are dominant over the entire sample, no special size-advantage is therefore indicated for them on the strength of their being the indogenous community. Instead, along with the muslims there is more numerical dominance in the lowest sized-classes. Of these castes/communities, the dominant group is also largely illiterates although differences between sub-marginal, marginal and small/medium

cultivators in literacy/ illiteracy terms is much more accentuated. Whereas the dominant section among the smaller size-group is illiterate, the medium size-group tends to have had some access to education even above the primary stage. In fact, the highest proportionate concentration among literate cultivator groups occurs at levels between primary and middle schools.

As such it may be stated that owner cultivators present largely SC and largely literate sub-sample characteristics even though in terms of size of ownership holdings they largely fall into the sub-marginal to medium group which is characteristic of a peasant economy, especially when it is remembered that the naming of acreage holdings as sub-marginal/medium/large is relative to the study area rather than to size-definitions for India as a whole.

### 3.3 Access to Formal and Informal Credit

In this section we shall try to evaluate the nature of rural credit market in a backward agrarian economy and examine the accessibility of poor peasants to rural credit in order to explain the genesis of interlinkages.

The rural credit market is of two types : organised and unorganised. Within the organised rural credit sector we have a number of formal lending institutions like Cooperatives, Commercial Banks, Land Development Banks, etc. which provide credit for meeting working capital requirements of cultivating households. The unorganised or informal rural credit sector includes a number of private individuals like cultivators, neighbours, friends and relatives, professional money-lenders, shopkeepers, etc. who provide relatively minor credit-support to the consumption/ production needs of the cultivators.

It has been argued by a number of economists and social scientists that formal credit market in rural areas of developing countries tend to be highly imperfect, with access to credit being easier for some groups than for others.<sup>1</sup> Since recent times, institutional agricultural credit has been given importance in the rural development programme of most developing countries including India. Following technological change in agriculture over recent years, credit-needs of small farmers have increased enormously. In this context therefore, the question of effective access to formal credit institutions is of crucial importance.

Increased supply of institutional agricultural credit to the rural people is considered essential because of various reasons. Firstly, it has been argued that increased production loans to agriculture are essential for achieving higher rates of growth in production and for changing the composition of production for those cultivators who presently do not produce enough to meet their own subsistence needs.<sup>2</sup> Secondly, an increase in formal credit is supposed to shift rural borrowers from informal money-lenders to formal institutions on more favourable credit-terms and thus encourage them to borrow more towards the adoption of new technology and the use of improved inputs and modern farm implements, thus increasing both production and income of the rural poor.<sup>3</sup> Thirdly, growth of output and productivity in agriculture would increase per capita real income, which would in turn reduce risk premia and hence reduces rural rates of interest which presently are generally high.<sup>4</sup> This would as a result, weaken the position of rural money-lenders.<sup>5</sup> Evidence from developing countries, however, increasingly suggests that benefits from expanded institutional credit have seldom gone to the poorer cultivators. The primary advantages have accrued to large cultivators. Several explanations have been provided in the literature to explain the fact that the participation of poorer cultivators in the formal credit institutions is limited. It has been argued that the credit policies with an urban bias followed in low income countries, have led to smaller allocation of formal credit to the rural poor.<sup>6</sup> The asset-based lending policies pursued by the formal credit institutions have often rationed credit in conformity with the ability to offer collateral. Since the ability of small and marginal cultivators to offer collateral is quite limited, their access to formal credit market is

proportionately reduced.<sup>7</sup> A very important factor in explaining poor participation of small and marginal cultivators in the formal credit market is the higher *transaction cost*<sup>8</sup> incurred in pursuance of loans by small borrowers compared to large borrowers which discourages them from approaching the formal credit institutions.<sup>9</sup> Finally, patronage, arbitrariness and corrupt practices pursued by the financial institutions in selecting borrowers further limit the small cultivators' access to formal credit.<sup>10</sup>

In view of their access to the formal credit being limited, the poor borrowers depend on informal sources of credit. But the informal credit market for this section of borrowers is highly fragmented and borrowers from one source may not have or may be denied equal access to other sources. Very often the loans are highly personalised in nature and credit is advanced on the basis of personal relationships existing between borrowers and lenders. In such a situation, community and residential status of the borrower play a dominant role in the matter of credit transactions in a peasant economy with face-to-face interactions. There is reason now to study the actual access of the owner cultivators to formal and informal credit institutions using field survey data from the district of Cooch Behar in West Bengal. The credit position of pure owner-cultivators as found in the survey is depicted in Table 3.4.

**Table 3.4**  
**Distribution of Sources of Credit by Various Classes of Pure Owner-Cultivators**

Region	Class of Households	Households Receiving Credit from			Total Indebted HHs	Total Number of HHs	Ratios		
		Institution only	Private only	Both Institution & Private			Ratio of Indebted HHs	Ratio of Institutionally Indebted HHs	Ratio of Privately Indebted HHs
		(1)	(2)	(3)	(4)	(5)	[(4) as % of (5)]	[(1) + (3) as % of (5)]	[(2)+(3) as % of (5)]
I	Sub-marginal	3	11	4	18	24	75.00	29.17	62.50
	Marginal	4	8	3	15	21	71.43	33.33	52.38
	Small	9	12	4	25	29	86.21	44.83	55.17
	Medium	7	5	2	14	16	67.50	56.25	43.75
	Large	8	1	2	11	13	84.62	76.93	23.08
	Total	31	37	15	83	103	80.58	44.66	50.48
II	Sub-marginal	-	8	6	14	23	60.87	26.09	60.87
	Marginal	1	5	7	13	18	72.22	44.44	66.67
	Small	6	7	4	17	21	80.95	47.62	52.38
	Medium	5	3	1	9	11	81.82	54.55	36.36
	Large	3	1	2	6	8	75.00	62.50	37.50
	Total	15	24	20	59	81	72.84	43.21	54.32

HH = Household

*Note : Col. 7 & Col.8 do not add up to Col.6 because of certain households having received loans from both institutional and private sources .*

**Source : Field Investigation**

It is observed from Table 3.4 that about 81 percent of the cultivator households in Region-I and 73 percent in Region-II have entered the credit market as recipients of loans. This implies indirectly a high degree of credit-dependence on the part of cultivators in both regions. Across different size classes, the percentage of indebted cultivators varies between 75.00 - 80.58 percent for Region-I and between 60.87 - 75.00 percent for Region-II. The level of indebtedness also does not vary substantially across size-classes.

In spite of the rapid expansion of institutional credit in the district in recent years (see Section 2.7), we find informal (private) sources of credit still occupy a dominant position in the rural credit market. Only 37 percent of the loan-receiving cultivators in Region-I report sole dependence on institution as against 45 percent on private sources. Considering also the cultivators who have taken loans both from institutional and private sources, 44.66 percent of the cultivators in Region-I are found to depend on institutional sources of credit. The comparable figure for private sources is, however, 50.48 percent. Private sources in Region-I are therefore seen to dominate the institutional sources on both counts. Similar results are also obtainable from Region-II. It therefore appears that over the two sample regions as a whole the private sources of credit still dominate the institutional sources.

Col. 7 of the table describes the participation of the pure owners in the formal credit market. It is seen that the percentage of households borrowing from formal institutions increases with the size of ownership holding. There is thus a direct relationship between landbase and degree of dependence on formal credit market for the owner cultivators included in our sample. This suggests that credit tends to gravitate towards better-off farmers. A number of factors have been pointed out earlier in this section which can explain the lower access of the poor peasants in the formal credit market.

The dependence of the households on informal (private) sources of credit generally declines with the size of ownership holding (col.8, Table 3.4). It is observed that the ratio of privately indebted households tends to decline over the entire sample region with an increase in the size of holding.

### 3.4 Typology of Informal Loans

We have classified informal loans into two broad categories : consumption loan and production loan. Consumption loan have been defined as loans taken in cash or kind at any time of year (and not necessarily in the pre-harvest lean season) for purposes other than meeting agricultural costs. Loans required for meeting expenditure on medical treatment, on religious rites and rituals and for general consumption (such as food, clothing, house-repair, education, etc.) are included in this category. Production loans are loans taken in cash or kind for meeting working capital needs only. Loans taken either in physical form or as cash towards purchase of seed, fertilizer and for improvements on land (such as irrigation) are included in this category.

Table 3.5 shows the typological break-up of credit for 52 households in Region-I and 44 households in Region-II who report having taken credit from informal sources. The following points emerge from the study of the table. Firstly, consumption loans dominate over production loans among the owner cultivators included in our sample. About 46 percent of the privately indebted cultivator households in Region-I reported having taken consumption loans only against which the corresponding figure for production loans is about 33 percent. Considering also the cases where the cultivators have taken both production and consumption loans, the percentage of households receiving consumption loans rises to about 67 percent. Here again, this figure outweighs the corresponding figure for cultivators receiving production loans (which rises to about 54 percent). Similarly, an aggregate of about 73 percent of privately indebted households have reported their recourse to consumption loans in Region-II compared to 43 percent for production loans. For owner cultivators as a whole, consumption needs therefore dominated over production needs in determining their entry into the informal credit market. This is thus a noteworthy feature of rural credit markets in a region characterised by the peasant -subsistence mode of cultivation.

**Table 3.5**  
**Type-wise Break-up of Credit from Informal Sources**

Region	Household Category	Consumption Loan	Production Loan	Both	Total
I	Sub-marginal	13	1	1	15
	Marginal	3	2	6	11
	Small	8	4	4	16
	Medium	-	7	-	7
	Large	-	3	-	3
	Total	24(46.15)	17(32.69)	11(21.16)	52 (100.00)
II	Sub-marginal	11	1	2	14
	Marginal	6	1	5	12
	Small	8	3	-	11
	Medium	-	4	-	4
	Large	-	3	-	3
	Total	25(56.82)	12(27.27)	7(15.91)	44(100.00)

*Note : Figures in parentheses denote percentages to total.*

**Sources : Field Investigation**

In terms of relative importance, production loans seem to be more important to Region-I than to Region-II, since it is observed that around 54 percent of privately indebted households in Region-I have received credit for production purposes. The higher demand for production loans in Region-I is positively because it is relatively better irrigated.

An important observation from Table 3.5 relates to loan-seeking behaviour over different classes of cultivators. Medium and large cultivators are not seen to require consumption loans. The incidence of consumption loan is highest down the economic scale among sub-marginal cultivators. As many as 87 percent of sub -marginal cultivators in Region-I and 79 percent in Region-II report having taken consumption loans<sup>only</sup>. Although production loans are taken by all classes of cultivators, the higher incidence of such loans is among medium and large cultivators who, in both regions, avail of production loans only. The result of the analysis is marked demarcations between credit-seeking motives between larger versus smaller cultivators. While the relatively smaller cultivators borrow in order to subsist, relatively larger cultivators borrow in order to produce. This would concur with the expectations raised from socio-economic stratification earlier made among the owner cultivators.

### 3.5 Sources of Informal Loans

Pure owners in our sample find five sources in the rural credit market for informal loans, namely, neighbours, friends and relatives, traders, professional money-lenders and village shopkeepers. Of these, the first two i.e. neighbours and friend/ relatives are actually cultivators directly participating in production process themselves and as such may be described as internal sources of credit in a peasant economy. The other three sources i.e traders, professional money-lenders and village shopkeepers are basically non-cultivators, primarily interested in the credit market because of the usury income from lending and are therefore external suppliers of credit to the peasant economic system. Within the self-perpetuating peasant economy, the credit-needs of the borrowers in normal circumstances are met from sources internal to it. Only when credit-needs assume such large magnitude that they cannot be sustained from within the system, does the entry of usurious external sources become possible.

Looking now at borrowing for production purposes, source-wise break-up of production loan for 28 cultivators in Region-I and 19 cultivators in Region-II is shown in the following table.

**Table 3.6**  
**Source-wise Break-up of Production Loan from Informal Sources**

Region	Household category	No. of HHs Receiving Production Loan	No. of HHs Receiving Production Loan from			
			Traders	Neighbours	Friends & relatives	Professional Money-lenders
I	Sub-marginal	2	-	-	-	2
	Marginal	8	7	2	-	1
	Small	8	5	1	1	2
	Medium	7	1	4	3	-
	Large	3	-	1	2	-
	Region Sub-total	28	13(46.43)	8(28.57)	6(21.43)	5(17.86)
II	Sub-marginal	3	-	1	-	2
	Marginal	6	4	1	2	-
	Small	3	2	-	2	-
	Medium	4	-	2	1	1
	Large	3	-	3	-	-
	Region Sub-total	19	6(31.58)	7(36.84)	5(26.32)	3(15.79)
Total Sample		47	19(40.43)	15(31.91)	11(23.40)	8(17.02)

*Note : Figures in parentheses denote percentages to total. With some households utilising more than one sources over the reference year, the percentages need not add up to 100.*

**Source : Field Investigation**

The importance of various sources of production loan is revealed by Table 3.6. Of these sources, traders are by far the most important source of production loan since these exceed in magnitude the internal bearing capacity of the peasant economy. Out of 28 cultivators receiving production loans in Region-I traders account for 13 cases (46 percent), neighbours account for 8 cases (29 percent) while friends/relatives and professional money-lenders account for 6 cases (21 percent) and 5 cases (18 percent) respectively. The same distributional pattern of indebted cultivators by source is also discernible in Region-II. For the two sample regions as a whole, traders are therefore, the most important credit-source for production loan (sourcing 40 percent), followed by neighbours (32 percent). Friends and relatives (23 percent) and professional money-lenders (17 percent) supply the remainder. In a peasant economy, the capacity of internal sources (i.e. neighbours and friends/relatives) to advance loans for production purposes is in any case rather limited because such loans are relatively larger in magnitude. They can meet only a part of the total demand for production loans. This is the point of entry of usurious external sources (i.e. traders, professional money-lenders) with different conditionalities. The next section of the study will reveal that all the traders advance production loans as cash or physical input on the additional conditionality that borrowers would repay the loan through pre-committed sale of output. An important point emerging from the table is that the traders account for a larger proportion of production loans in Region-I, than in Region -II. Loans advanced by the traders are more readily accessible in Region-I which is relatively better irrigated implying that traders are more confident about repayment of loans from the sale of borrowers' output in this relatively more productive region and consequently estimate lower risks of default on the part of the borrowers.

Moving back to the other loan component, the source-wise break-up of consumption loans for 35 cultivators in Region-I and 32 cultivators in Region-II is shown in the following table.

**Table 3.7**  
**Source-wise Break-up of Consumption Loan from Informal Sources**

Region	Household category	No. of HHs Receiving Consumption Loan	No. of HHs Receiving Consumption Loan from			
			Neighbours	Friends & relatives	Professional Money-lenders	Shop-keepers
I	Sub-marginal	14	10	2	-	5
	Marginal	9	3	7	3	1
	Small	12	6	4	2	1
	Medium	-	-	-	-	-
	Large	-	-	-	-	-
	Region Sub-total	35	19(54.28)	13(37.14)	5(14.28)	7(20.00)
II	Sub-marginal	13	6	2	5	1
	Marginal	11	4	5	3	-
	Small	8	3	6	-	-
	Medium	-	-	-	-	-
	Large	-	-	-	-	-
	Region Sub-total	32	13(40.62)	13(40.62)	8(25.00)	1(3.12)
Total		67	32(47.76)	26(38.80)	13(19.40)	8(11.94)

*Note : Figures in parentheses denote percentages to total. With some households utilising more than one sources over the reference year, the percentage need not add up to 100.*

**Source : Field Investigation**

Table 3.7 reveals neighbours to be the most important source for consumption loans to pure owners. Out of 67 cultivators receiving consumption loans from informal sources, 32 cultivators (48 percent) source these from neighbours, 26 cultivators (39 percent) from friends and relatives, 13 cultivators (19 percent) from professional money-lenders and only 8(12 percent) from shopkeepers. The study reveals in the next section that these neighbour-creditors are often responsible for interlinking of credit and labour contracts through provision of consumption loans to poor sub-marginal cultivators.

Consumption loans are generally of short-duration and involve smaller quantum of money. As such the major portion of consumption loans is supplied by the internal sources i.e. neighbours and friends and relatives. Only when the demand for consumption loans assumes a larger magnitude which cannot be sustained within the internal fabric of the peasant economy, do poor peasants feel confident to approach external sources i.e. professional money-lenders and shopkeepers for consumption loans.

An important feature of lending in our peasant agrarian economy is the existence of interest-free loans. All loans provided by the "friends and relatives" are interest-free. Neighbours on the other hand usually charge nominal monthly rates of interest at around 5-7 percent when the loan is repaid as cash. In comparison, the rates of interest charged by the professional money-lenders are relatively higher at around 10-12 percent per month. The shopkeepers are found to charge the highest rate of interest in our study area, which varies between 15-20 percent per month. It is therefore revealed that internal credit sources in a peasant economy generally advance credit at more concessional terms compared to external sources, who tend to charge usurious rate of interest.

### 3.6 Informal Loans and Interlinkages

Tracing the compulsions behind consumption loans, it is the poor peasants whose total income from all sources including wage income, does not simultaneously satisfy the requirements of family consumption and working capital for cultivation have to depend on credit for financing some of these activities, especially during the lean period or the months following a bad harvest. In regions where formal credit flow are inadequate in relation to demand as is the case in our study area, the informal credit market tends to assume pivotal importance, especially for meeting the pressing needs of poor farmers. Because of the compelling nature of their expenditure, they have to borrow even on adverse terms and conditions. These borrowers who do not have non-labour assets which can be used as suitable collateral, may only be in a position to negotiate their loan-needs against future promise of labour service and / or standing crop. The obligation to pledge these non-marketable<sup>11</sup> collaterals to the lenders provide the latter an opportunity to offer loan to the poor borrowers in association with a combination of more than one transaction. Therefore, the credit market tends to interlink with other markets, including those for labour, input or output as is evident in our study area.

Over all sources of informal credit mentioned in the analysis above, it is the traders and occasionally the neighbours who are primarily responsible for the interlinking of markets in our study area. In certain cases the neighbours advance cash or crop loans to poor peasants over the slack season in order to get ready supply of labour services from the borrowers during the peak season. In this way, credit market becomes intelokced with labour market. The traders, on the other hand, advance cash or input on credit to the borrowers on the understanding that the borrowers will sell their produce to the traders immediately after the harvest at lower prices. In this way, the traders try to control the output market through credit-output linkage.

We find that three types of credit-interlinkages occur among different classes of pure owners included in our sample, which are enumerated below :

1. *Credit linked with input and output (CIO)* : In this type of linkage, the lenders advance inputs (seeds and fertilizers) on credit to the borrowers on condition that they will sell their produce after the harvest at creditor-determined prices. Besides, the borrowers also have to pay interest charges for the duration of loan. The lenders in such cases are all grain traders who seek to exercise control over the borrowers' output, particularly for boro paddy, the production of which is highly input-intensive by nature and necessity.
2. *Credit linked with output (CO)* : This interlinkage differs from the earlier one (CIO) in the sense that cash credit instead of input loan is supplied in this case by the lender on condition that the borrower will repay the loan through future committed sale of output. This type of linkage operates in the production of winter vegetables in our study area, which is less input-intensive than the production of boro paddy.
3. *Credit linked with labour service (CL)* : This linkage relates to labour-linked borrowing. Poor peasants sometimes negotiate loans in cash or kind against future promise of labour service, for which, however, they would be paid at market wage rates. Here the advantage of the interlinked loan-terms to the creditors are in terms of having committed supply of labour available when they might need it, rather than direct pecuniary advantage.

#### ***Credit-Labour Linkage :***

Considering first the character of CL-linkage, in the study region, agricultural labour from among owner cultivators is generally provided by sub-marginal and marginal cultivators whose meagre

farm income is not sufficient to meet family consumption needs. They need in addition to sell their labour services to supplement meagre farm income. Labour activity by this group of poor peasants is more in the nature of a subsidiary occupation and is moreover restricted by the amount of time they have to devote to their own cultivation. This group of labourers very often depends on informal sources for consumption loans, especially in the pre-harvest lean season. However, the credit-labour linkage among owner cultivators in our study area is confined to sub-marginal cultivators only, a section of whom are seen to negotiate loans on cash or kind terms committing themselves to future labour supply. Since they do not earn sufficient cash income to repay the loan, repayment in terms of labour supply is convenient to them. Certain creditors are also seen to extend credit- support to these borrowing labourers in lieu of credit-linked labour services. It therefore appears that both non-financial as well as financial considerations play important roles in explaining the occurrence of credit-labour linkage in our study area. Table 3.8 provides information on the incidence of credit-labour linkage.

**Table 3.8**  
**Interlinking of Credit and Labour Contracts**

Region	Household Category	Number of HHs Borrowing Informal Sources	Number Receiving Loan against Future Commitment of Labour Supply	Number of Households Who Worked for Their Lenders		Number Rendering Unpaid or Under-paid Non-farm Services to the Employers against the Loan
				At MWR	Below MWR	
I	Sub-marginal	15	8	8	-	-
	Marginal	11	-	-	-	-
	Small	16	-	-	-	-
	Medium	7	-	-	-	-
	Large	3	-	-	-	-
	Total	52	8	8	-	-
II	Sub-marginal	14	6	6	-	-
	Marginal	12	-	-	-	-
	Small	11	-	-	-	-
	Medium	4	-	-	-	-
	Large	3	-	-	-	-
	Total	44	6	6	-	-

Note : MWR = Market wage rate

Source : Field Investigation

In course of the survey, a section of privately indebted sub-marginal cultivators reported that they had obtained consumption loans from their neighbours (who also happen to be larger cultivators) on condition that they would repay loans by working for the lenders at a future date. The lenders often enter into an implicit contract with the borrowing labourers such that the borrowers will guarantee to do a particular piece of work (for instance, planting or harvesting of paddy) at a future date. The labourers undertake to continue to work for the same employer till the agreed work is completed. We later describe this type among labourers as *semi-attached* labourers who remain attached to a particular employers for a few number of days (for details, see Ch. 5). Since the average amount of loan is usually very low (between Rs. 55 and Rs. 130), the period of attachment with a particular employer is not very long (which necessarily does not exceed 13 days at a time). The smaller size of loans therefore imparts a seasonal character to the credit-labour linkage in our study area. This type of labour attachment against the provision of consumption loans is very common to the region. The consumption loans involved are, however, highly personalised in nature and are given only to those labourers with whom the lender has a long-standing social relationship.

Table 3.8 shows that ten percent more of sub-marginal borrower cultivators in Region-I received credit against future commitments of labour supply as compared to Region-II. With the percentage of sub-marginal borrower cultivators in the two regions lying between one-fourth to one-third of the total number of sub-marginal cultivators, this accentuates the fact that the CL-linkage is the primary arrangement for credit among this group. All such linked labourers in Region-I and Region-II also report having worked for their creditors at prevailing market wage rates at the time of repayment of loan.

The advantages of the CL-linkage to the relatively poor farmers is that it allows for collateral substitution in the informal credit market, and also provides assured employment for a defined length of time, however short it may be. From the lenders' point of view this arrangement is theoretically convenient due to the following reasons:<sup>12</sup>

- (i) assurance of supply of labour services from borrowers, in times of need on priority basis;
- (ii) saving of time and recruitment cost by not having to contract a number of casual labourers during the peak of major agricultural operations.
- (iii) reduction of wage costs by hiring the labour service of these borrowers at lower than market wage rate.

No evidence of the third of this is seen in our survey results, since all linked labourers were paid at market wage rates prevailing at the time of work.

It has been argued in several studies of interlocking that the essential feature of feudal relationships is related to the appropriation of surplus in the form of unpaid labour services by the employer-creditor through *extra-economic coercion* or social and legal compulsions. But we have not observed any case of extra-economic coercion being exercised by the creditor to extract unpaid labour services from the borrowers. All linked labourers report having received prevailing wages and that no effective pressure was applied on them to restrict their entry into the free labour market. Moreover, it was also revealed that they did not perform any non-farm services for the lenders. The relationship of borrower and lender arises purely from economic considerations. Therefore, we do not find any reason to describe this type of temporary labour-tying arrangement as a feudal or semi-feudal manifestation of production relations. This point is further elaborated in Chapter 5.

#### ***Credit-Output and Credit-Input-Output Linkage :***

It is a characteristic of agricultural production as compared to industry, that it is spatially dispersed, with individual producers enjoying only limited access to central markets. This becomes particularly true in rural economies where communication and transport systems are imperfectly developed. Marketing, under most economic systems, is carried out by specialised marketing intermediaries through whom farm products flow from their original producers to final consumers via various intermediaries, special market facilities and contractual arrangements which mediate the transactions between producers, marketing intermediaries and final consumers.<sup>13</sup>

At the village level, the number of such intermediaries is necessarily small. Consequently market imperfections arise, because of personalised transactions and various bilateral arrangements between producers and marketing intermediaries substituting for competitive markets.<sup>14</sup>

In a poor agrarian economy certain institutions are developed as a substitute for missing markets in an environment of pervasive risks, market incompleteness, and information asymmetry. In the absence of a complete set of smoothly functioning markets for factors and commodities and above all for credit and risk, households find it advantageous to enter into simultaneous transactions with each other in more than one markets.<sup>15</sup> The credit-output interlinkage, for example, is one such instance of simultaneous transactions taking place between the producers and traders.

In our study area, the marketing of agricultural produce is observed to be controlled by private traders. There are different kinds of intermediate market functionaries known locally as *fariah*, village merchant, *beparies*, *aratdars*, wholesalers, brokers, etc. who are the middlemen. These functionaries play a very significant role in the process of marketing agricultural produce from the farmers to the ultimate consumers. An aratdar (namely trader) often enters into a contract with a farmer under which the trader provides a credit for cultivation against a commitment by the farmer to sell his harvest only to the lender at a price lower than that prevailing in the market. Such activity of the traders leads to interlocking of credit and output contracts.

The following table gives us information on CO /CIO-interlinkages.

**Table 3.9**  
**Interlinking of Credit and Output Contracts**

Region	Household Category	Number of HHs Borrowing from Informal Sources	Number of HHs Receiving Loan against Future Commitment of Output	Number of HHs Selling Their Produce to Their Lenders	
				At Market Price	Below Market Price
I	Sub-marginal	15	-	-	-
	Marginal	11	7(2)	-	7
	Small	7	5(1)	-	5
	Medium	7	1	-	1
	Large	3	-	-	-
	Total	52	13(3)	-	13
II	Sub-marginal	14	-	-	-
	Marginal	12	4	-	4
	Small	11	2	-	2
	Medium	4	-	-	-
	Large	3	-	-	-
	Total	44	6	-	6

*Note : Figure in parentheses denote the number of borrowers receiving input-loans (i.e. seed and fertilizer).*

**Source : Field Investigation**

Table 3.9 shows that 25 percent of cultivator households in Region-I and 13 percent of households in Region-II from among those borrowing from informal sources have borrowed from traders against future commitment of output. One-fourth of such output-linked borrowers in Region-I report having received input-loans i.e. seeds and fertilizers. On the other hand, all the output-linked borrowers in Region-II have received cash loans from the traders. Out of 19 cultivators in Region-I and Region-II sourcing output-linked loans from traders, 16 are subject to CO-linkage and only 3 cultivators (in Region-I) are involved in CIO-linkage.

Credit-output linkage (CO) in our study area is a seasonal phenomenon particularly observable in the production of winter vegetables (e.g. cabbages, cauliflower, etc.). The traders advance cash loans to vegetable growers against committed future sales of vegetable. The incidence of such linkage is slightly higher in Region-I which is relatively better irrigated. In contrast, credit-input-output (CIO) interlinkage is found in the production of boro paddy (HYV spring paddy) where water and fertilizer requirement is very high. The CIO-linkage is prevalent in Region-I only where the cultivation of boro paddy has recently taken a foothold with the help of the existing irrigation facility, which is why the incidence is relatively high. The production of boro paddy is virtually non-existent in Region-II where irrigation facilities are very poor. Grain traders in Region-I however sometimes advance seed and fertilizers to willing farmers on the condition that the farmers would sell their output of boro paddy to the traders. Where boro cultivation involves the production of paddy in a non-traditional season, the consequent ability of the trader to corner the output in a scarce situation gives him considerable market advantage.

Numerically therefore, the CO-linkage is more powerful than the CIO-linkage. It appears that output-linked credit transactions in our study area are primarily a phenomenon observable in the production of winter vegetables, although in certain cases it has also entered in the cultivation of paddy. In a small peasant-oriented subsistence economy where production of paddy takes place mainly for domestic consumption and not for sale in the market, the poor peasants are unlikely to be very responsive to any interlocking arrangement in the production of paddy which increases their involuntary involvement in the market as sellers. However, the response of the peasants is likely to be opposite in the production of vegetable which is produced mainly for the market. Interlinking arrangement in vegetable production is therefore easily acceptable to a poor peasant than in the production of paddy.

Table 3.9 also reveals that CO/CIO-linkage is largely confined among marginal and small cultivators. Neither sub-marginal nor large cultivators are involved in this linkage. All interlinked cultivators also report that they have sold their output to the lender-traders at lower than market prices. Moreover, the lenders also charge higher prices against inputs advanced on credit to the borrowing cultivators. Output-linked loan transactions, therefore, involve both explicit (stipulated) and implicit (hidden, as for example, in the forms of over-valuation of inputs given as loans and / or under-valuation of products offered by the borrowers to the lenders) extraction of interest. A methodology for measuring such rates is evolved later.

The production of boro paddy (HYV) and vegetables has been a recent addition to the cropping-matrix of the district. The introduction of these new crops with higher monetary yield per acre may thus appear as an income-augmenting technological improvement in the area. A small peasant surviving on the verge of subsistence, can not generally be expected to have the economic ability to bear either the additional risk or the cost of introducing new technology in agriculture. In a poor agrarian economy where the actual accessibility of small peasants to the organised credit market is very limited, they have to fall back upon the traders for working capital to finance the new technological opportunities. The professional trading class whose primary aim is to extend control over the marketing of output, can not normally be expected to play a leading role in the technological transformation of backward agriculture which may improve the economic condition of the poor peasants and consequently may weaken their grip over the peasant. They advance production loans to the small peasants who are liable to sell their produce to the traders at lower than market prices immediately after the harvest. Commercial exploitation of the indebted peasants thus takes place through the network of exchange relations. The traders extract very high effective interest (implicit & explicit) from the poor indebted peasants thus enhancing the extraction of agricultural surplus through 'unequal exchange'. Commercial capital thus plays a crucial role in inhibiting the process of technological diffusion among the small peasants because of intensified commercial exploitation by traders who extend their control over marketing of products.<sup>16</sup>

### 3.6.1 Types and Extent of Interlinkages

There are a total of 33 interlinked households (i.e. 17.9 percent) among 184 pure owner-cultivators found in our sample. A little less than half are labour-linked and the remaining are output-linked. The following table gives a type-wise break-up of interlinkages among various classes of pure owner-cultivators.

**Tabld 3.10**  
**Types of credit interlinkages among various classes of pure owner-cultivators**

Household Category	Types of Linkage	Number of Linked Borrowers			Principal Source of Lending	Description of Loan	Mode of Repayment
		Region I	Region II	Total			
Sub-marginal	CL	8	6	14(42.42)	Neighbours	Cash, Grain	Payment in terms of Labour Service
Marginal	CO	5	4	9(27.28)	Traders	Cash	Payment in output (Vegetable)
	CIO	2	-	2(6.07)	Traders	Fertilizer, Seed	Payment in grain (Paddy)
Small	CO	4	2	6(18.17)	Traders	Cash	Payment in output (Vegetable)
	CIO	1	-	1(3.03)	Traders	Fertilizer, Seed	Payment in output (Paddy)
Medium	CO	1	-	1(3.03)	Traders	Cash	Payment in output (Vegetables)
Total	-	21	12	33(100.00)	-	-	-

Note : Figures in parentheses denote the percentage of individual type linkage to total linked borrowers.

Source : Field Investigation

The difference in numbers between Region-I and Region-II are basically accounted for by differences in their level of agricultural development, especially since the data in the table pertain mainly to production loans. Table 3.10 also shows that CO-interlinkage is the dominant form of interlinkage, followed by CL and CIO-interlinkages. It is found that CO-linkage accounts for just under half the total cases, CL-linkage accounts for around 42.42 percent and CL-linkage 9.1 per cent of the cases. The relative importance of different types of interlinkages are shown in the diagram.

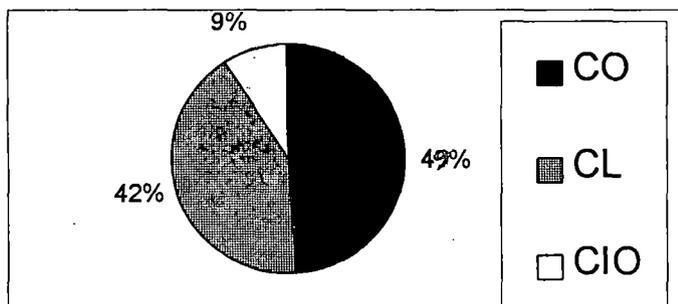


Fig. 3.1 : Typology of Interlinkages Among Owner Cultivators

It is seen also that trader-sourced loans are the primary means of credit-support for production purposes that are availed by marginal to medium owner cultivators, whereas sub-marginal cultivators basically depend on neighbours for labour-linked credit. A certain (small) proportion of cultivators in the marginal and small categories avail of input-support offered by the traders for engaging in cultivation of boro paddy. The phenomenon is interesting because input costs of boro cultivation by medium and large cultivators are self-financed. The relatively weaker economic class of marginal and small cultivators is able to emulate them with the support of the traders in the region (i.e. Region-I) where the other important requirement for boro cultivation, namely the irrigation facility, is adequate. Bearing in mind

that boro cultivation is a relatively recent (because the irrigation facility is relatively recent), the grain-trader is a new comer in the informal rural credit market. On the other hand, traders financing CO-linked credit are the vegetable traders who have more traditional presence in the informal credit market. Since the grain traders usually also double as traders in inputs such as seeds and fertilizers, the CIO-linked credit-support they offer to the marginal and small cultivators is basically an extension of that input market besides affording an advantaged entry into the market for agricultural produce.

The following table shows the extent of interlinked transactions among different classes of cultivators over the entire sample.

**Table 3.11**  
**Interlinked Transactions in the Informal Credit Market of the Study Region**

Household Category	Total Number of Households	Number of Households Borrowing from Informal Sources	Number of Households Borrowing with Inter-linked Transactions	Percentage - Ratios		
				BH	IBH	IBH:BH Ratio
Sub-marginal	47	29	14	61.70	29.79	48.28
Marginal	39	23	11	58.97	28.21	47.83
Small	50	27	7	54.00	14.00	25.92
Medium	27	11	1	40.74	3.70	9.05
Large	21	6	0	28.57	0.00	0.00
Total	184	96	33	52.14	17.93	34.38

*Note : BH = Borrowing Household  
IBH = Interlinked Borrowing Household*

**Source : Field Investigation**

It is seen from Table 3.11 that 61.70 percent of the sub-marginal cultivators have borrowed from informal sources, of whom nearly half have participated in linked credit transactions. This is also nearly true for marginal cultivators. In terms of credit-dependence the position of small cultivators is relatively similar but a significant decline takes place in their dependence on interlinked transactions. There after sharp progressive decline in both, credit-dependence and in dependence on interlinked transactions is seen for the larger land-categories, namely medium and large cultivators. The large cultivators are free of any compulsion to enter interlinked transactions.

The IBH-ratio in the table shows that just under a third of the sub-marginal cultivators in our sample have borrowed through interlinked credit transactions. While the ratio is similar for marginal cultivators, it shows substantial progressive decline over larger land-categories and ultimately is nil for large cultivators.

It would also be necessary to consider the relative importance of consumption versus production loan needs in explaining the pattern of credit-linked transactions found among the pure owners. The following table describes distribution of interlinked households according to the purpose of loan.

**Table 3.12**  
**Distribution of Interlinked Households According to Purpose of Loan**

Category of Household	Number of Interlinked Households	Number of Household Interlinked through	
		Production Loan	Consumption Loan
Sub-marginal	14	-	14
Marginal	11	11	-
Small	7	7	-
Medium	1	1	-
Total	33(100.00)	19(57.58)	14(42.42)

**Source : Field Investigation**

From Table 3.12 we find that all interlinked sub-marginal owner cultivators are linked through consumption loans, but all others in cultivator-categories above them only source production loans. Over the combined sample, 57.58 percent of the total interlinkages are sourced from production loans while 42.42 percent are sourced from consumption loans. Production loans thus seem to be responsible for explaining interlinkage for the majority of the linked owner-cultivators, especially for the larger categories among them.

The foregoing analysis has pointed out that interlinkage in our study area is confined to households with lower economic status i.e. sub-marginal, marginal and small cultivators. Collateral-poor borrowers would prefer to settle loan obligations in terms of output, only when this not possible (i.e. among the sub-marginal category), they offer their labour services as repayment of loans. Therefore, the order of interlinkages found among different cultivator-categories appears to be essentially a manifestation of survival strategy of the collateral-poor rural households in a backward agrarian economy.

### 3.7 Terms of Borrowing from Informal Sources

In order to obtain some idea about the terms and conditions that apply to borrowing from informal sources let us first consider the modes of repayment of such loans. In our study area 7 modes of repayment apply to informal loans, which comprise : (a) money to money; (b) money to crop; (c) input to crop; (d) money to labour; (e) crop to crop (i.e. grain) and (f) crop (i.e. grain) to labour. Table 3.13 and Table 3.14 describe the the modes of repayment of production and consumption loans respectively.

**Table 3.13**  
**Modes of Repayment of Production Loan**

Region	Modes/Sources	Traders	Neighbours	Friends & relatives	Professional Money-lenders	Total Instances
I	Money to Money	-	8	6	5	19
	Money to Crop	10	-	-	-	10
	Input to Crop	3	-	-	-	3
	Money to Labour	-	-	-	-	-
	Total	13	8	6	5	32
II	Money to Money	-	7	5	3	15
	Money to Crop	6	-	-	-	6
	Input to Crop	-	-	-	-	-
	Money to Labour	-	-	-	-	-
	Total	6	7	5	3	21

**Source : Field Investigation**

**Table 3.14**  
**Modes of Repayment of Consumption Loan**

Region	Modes/Sources	Neighbours	Friends & relatives	Professional Money-lenders	Shopkeepers	Total Instances
I	Money to Money	8	11	5	7	31
	Crop to Crop	3	2	-	-	5
	Crop to Labour	2	-	-	-	2
	Money to Labour	6	-	-	-	6
	Total	19	13	5	7	44
II	Money to Money	4	9	8	1	22
	Crop to Crop	3	4	-	-	7
	Crop to Labour	2	-	-	-	2
	Money to Labour	4	-	-	-	4
	Total	13	13	8	1	35

**Source : Field Investigation**

The modes of repayment presented in Table 3.13 and Table 3.14 indicate a high degree of monetisation of rural economy. In 86 percent of both production and consumption loans, the lending and/or repayment of loans involve the use of money. In only 14 percent out of 132 instances of production and consumption loans did the transaction take place without the use of cash. The incidence of various modes of repayment as revealed by field investigation are discussed below :

**Money to Money :** This emerged as the dominant mode of repayment in our study area. Out of 53 instances of production loans over the two regions, loans were both received and repaid in cash in around 64 percent of the cases. Similar percentage was found among 79 cases of consumption loans where the loan was taken and repaid in money.

**Money to Crop :** This emerged as an important type of mode of repayment from the view-point of interlinkage and covered output-linked credit advances by traders as production loans in cash. 16 instances of these were found, which have been interpreted as CO-linkage under Table 3.9.

**Input to Crop :** Trader-lenders also sometimes advanced seeds and fertilizer inputs on credit to the farmers against repayment from the resulting output. The 3 such instances of loans have been interpreted as CIO-linkages in Table 3.9.

**Money to Labour :** Out of 79 instances of consumption loans over the two regions combined, about 13 percent were loans repaid by the sale of labour services by sum-marginal farmers to their lenders. These provided the incidence of credit-labour linkages in Table 3.8. In all the 10 cases the CL-linked borrowers were paid at the prevailing market wage rate without interest being charged on the amount of loan advanced.

**Crop to Labour :** 4 instances were found where loans of grain were taken from neighbours and repaid by the sale of labour services. These have been interpreted as interlinkage between labour and credit contracts in Table 3.8. All such loans may be considered as interest-free loans because no implicit or explicit rate of interest is charged.

**Crop to Crop** : 12 instances were found of consumption loans where repayment of grain-loans were made from the subsequent paddy crops. In just 50 percent of such cases, loans are taken from neighbours and are repaid with an extra amount of paddy as the grain-rate of interest. The loans advanced by the friends and relatives however did not involve any grain-rate of interest. Such cases of borrowing had been done in the slack season and repayment was made immediately after the harvest. The duration of the loans was generally 3 months or less, and the basic grain-rate of interest (when it applied) varied between 25-40 percent of the crop advanced irrespective of the period of loan.

So far as the mode of repayment of production loans are concerned, we find that trader-credited loans cluster against the 'money to crop' and 'input to crop' repayment mode. No other repayment mode (e.g. cash) is accepted by the traders. This reveals the traders' strong motive in controlling the output market through advancing linked production loans, for which reason he participates in the informal credit market. The picture is however different for other sources who insist that the repayment should be in terms of money. The intrinsic difference in creditor-behaviour with regard to the choice of the preferred mode of repayment is accounted for by the size of loans advanced since production loans advanced by the traders are usually large (varying between Rs. 1000 and Rs. 2500 over an agricultural season), repayment in terms of future committed sale of output serves the interest of the traders by lowering the higher risk associated with the loan, besides guarantying recovery of loans. In comparison, loans advanced by other sources are smaller in magnitude, and since the creditors do not trade in agricultural produce, the acceptable form of repayment is money. This singles out trader-creditors as the source of usurious linkage, because of the coincidence of several motives within their willingness to advance larger loans. Firstly, the mercantile interest is served because the linkage allows cornering of stocks at lower prices. Secondly, in so far as the trader is also a dealer in agricultural inputs, the linkage expands his market and has monopolistic power to levy higher prices on inputs sold. Thirdly, his ability to outcompete rival traders is increased.

Looking now at the repayment modes of consumption loans we observe that the neighbours open various options for the recovery of loans from different category of borrowers. Since the neighbours are not seen to pursue any usurious motive behind lending, the borrowers are generally given a variety of choices of loan-repayment modes. However, repayment of loans in terms of labour services of the borrowers is seen to be the most important form of repayment -mode of neighbour-credited loans which benefits both the lenders and borrowers. The lenders can ensure availability of labour services in the peak agricultural seasons. The borrowers on the other hand can get interest-free loans by committing future labour services. The loans advanced by the friends and relatives are seen to cluster against 'money to money' and 'crop to crop' repayment forms with a denser concentration in the former. All such loans are goodwill loans which do not carry any rate of interest. Professional money-lenders and shopkeepers generally insist the repayment in cash and charge usurious rates of interest. An analysis of mode of repayment therefore reveals the motives of lending of different credit-sources in a peasant economy.

The terms and conditions of borrowing are also reflected by the collateral security used in the informal credit market. We present the information on various types of collateral securities used by the borrowing pure-owners in the study area in Table 3.15 below.

**Table 3.15**  
**Collateral Requirements in the Informal Credit Market, Cooch Behar (1990-91)**

Class of Households	Number of Borrowing Households	Number of Households Borrowing with Some form of Collateral as			Total
		Labour	Product	Others	
Sub-marginal	29	14	-	5	19(65.52)
Marginal	23	-	11	1	12(52.17)
Small	27	-	7	1	8(29.63)
Medium	11	-	1	1	2(18.18)
Large	6	-	-	0	0 (0.00)
Total	96	14	19	8	41(42.71)

*Note : Figures in parentheses denote percentages of indebted households borrowing with some form of security.*

**Source : Field Investigation**

Borrowers in our study area in most of the cases used non-marketable collaterals like future labour service/standing crop to raise loan in the informal credit market. In a very few cases however some "other" forms of collateral (such as wrist-watch, silver ornaments, brass utensils, land, etc.) have been used by the borrowers. It is found from Table 3.15 that 65.52 percent of loan-receiving sub-marginal cultivators obtained credit with some form of security. The corresponding figures for marginal, small and medium cultivators are 52.17, 29.63 and 18.18 percent respectively. The large cultivators borrow in the informal credit market without the use of security. Clearly, the percentage of households borrowing in the informal credit market with some form of security goes down with the increase in the status of the farm households. Out of 96 households borrowing in the informal credit market, 41 (i.e. 42.71 percent) have borrowed with some form of security. In most of the cases, labour and output are used as collaterals by the borrowing cultivators. 14 borrowing households used labour and 19 such households used output as collateral. As seen from the table, only the sub-marginal cultivators used labour and marginal, small and medium cultivators used output as collateral. Besides labour and output, the poor farm households also used some "other" forms of collateral. Land is used least by the farm households. Only one medium cultivator borrowing with "other" form of collateral used land to raise loan.

The evidence from our study area therefore shows that the poor-farmers generally use future labour services and output to raise loans in the informal credit market and in this way try to keep their tiny pieces of land for cultivation. Moreover, the percentage of households borrowing without security increases with an increase in the size of landholding of farm households, indicating their higher creditworthiness for the lenders.

Besides the terms and collateral-conditions of borrowing, another important aspect or character of informal credit transactions relates to interest terms. Since this aspect involves an additional computational exercise, it is dealt with separately in the next Section.

### 3.8 Variation in Interest Rates over Linked and Non-Linked Credit Transactions

#### *Method of Computation*

The terms and conditions of borrowing are also reflected by the interest charged on loans. But the calculation of rate of interest in the informal credit market involves some difficulties. Sometimes, creditors overvalue the commodities advanced as loan (e.g. seed and fertilizer) and/or undervalue the repayment-commodities (e.g. labour service or output). Even in cases of smaller loans, for example, where a 'paddy-interest' is charged, this involves the problem of valuation of commodity advanced and refund liabilities. While the refund liabilities in terms of the quantity of grain remains constant, its value at the time of loan repayment differs from the time of loan offer due to a change in price. To handle problems of this nature, separate computational methodologies are derived for calculating interest on CL, CO/CIO linkages and non-interlinked credit transactions, taking into account the different modes present among each.

#### *A. Labour-Linked Loan Transactions*

In case of labour-linked borrowings in our study area, no explicit or stipulated rate of interest is charged by the lender to the borrower. The only rate of interest that may arise is in the form of a wage-cut-implying an implicit rate of interest. The methodology for the calculation of the implicit rate of interest is presented below

##### (i) *Cash to Labour Service :*

When implicit interest exists, the actual wage rate paid ( $W_A$ ) will be less than the prevailing market wage rate ( $W_M$ ) at the time of rendering labour service. When  $W_A = W_M$  (i.e. when labourers are paid according to prevailing market wage rate), no implicit rate of interest would arise. Implicit interest rates therefore occur according as  $W_M \geq W_A$ . Here the payment of implicit interest will have taken the form of a wage-cut. When L is number of days of labour provided by the borrower to repay the loan, the total wage bill at actual wage rate ( $TW_A$ ) will be

$$TW_A = L.W_A$$

and the total wage bill at market wage rate ( $TW_M$ ) will be

$$TW_M = L.W_M$$

The total amount of implicit interest in such a case would therefore be

$$TW_M - TW_A = L.W_M - L.W_A = L(W_M - W_A) \dots (1)$$

In our study area the standard agreement for repayment of labour-linked loans involves a partial deduction by the employer from the wages payable by agreement each day until the loan is realised. With the loan principal as B an agreed rate of deduction of X Rs. would see the principal being repaid over B/X days determining the number of days for which the labourer commits to work for his creditor. Thus the total amount of implicit interest on the loan is given as

$$TW_M - TW_A = B/X (W_M - W_A), \text{ by transformation of equation (1).}$$

With the duration of the loans given as T, annualised implicit rate of interest ( $R_1$ ) can then easily be computed as

$$R_1 = \frac{(W_M - W_A) \times 365 \times 100}{XT}$$

Since no explicit rate of interest ( $R_2$ ) is found to exist on labour-linked borrowings in the study region, the effective rate of interest (R) which would have been the sum of implicit and explicit rate of interest is same as implicit rate.

(ii) *Kind to Labour Service :*

When credit is received in a kind-loan (i.e. rice/paddy) and is repaid through labour, it may be valued in terms of its cash equivalent by valuing the commodity borrowed (Bq) in terms of the commodity price prevailing on the time the loan was taken (P). Therefore, the market realisation of kind loan is P.Bq. Once the kind loan is converted into a cash equivalent, the money rate of interest on these loans can be calculated by applying the method developed above.

**B. Output-Linked Loan Transactions**

(i) *Cash to Output :*

As seen earlier, output-linked loans are an important feature of trader-creditors and involve a borrowing in terms of money against repayment by sale of output. Here a role equivalent to that of ( $W_M - W_A$ ) in the previous procedure is laid by ( $P_M - P_C$ ) where  $P_M$  = market price of output at the time of harvest and  $P_C$  = contracted purchase price at which the creditor purchases the output from the borrowers. By nature of the contract as seen in the study region,  $P_C < P_M$  and thus an element of interest arises purely from the differences in prices, which can, for the total amount of output realised as repayment (Q), be denoted as ( $P_M - P_C$ )Q. The implicit rate of interest ( $R_1$ ) would therefore be

$$R_1 = \frac{(P_M - P_C)Q \times 365 \times 100}{B.T}$$

In addition to this, such loans also carry a stipulated explicit rate of interest ( $R_2$ ) which has to be added to the annualised implicit rate of interest ( $R_1$ ) to arrive at total i.e. effective rate of interest (R) on the loan advanced. Thus

$$R = \frac{(P_M - P_C)Q \times 365 \times 100}{B.T} + R_2$$

(ii) *Input to Output :*

Traders are also seen to advance fertilizer and seed inputs against repayment to be made by the sale of output particularly against cultivation of boro paddy. A separate procedure has to be followed to calculate the rate of interest since the loan principal is also in kind and moreover inputs supplied

are valued at higher than market price. Here the method is similar to that above but the extra prices realised on input supplied have to be added to the interest element. These extra prices may be calculated as follows :

With  $p_m$  as the price of inputs and  $p_c$  as the contracted price-valuation of inputs,  $p_c > p_m$  according to the terms of the contract. With total quantity of inputs defined as  $q$  the extra price realised against inputs supplied will be  $q (p_c - p_m)$ . This has to be added to  $Q(P_M - P_C)$  to get the total implicit interest charges which is equal to  $Q(P_M - P_C) + q(p_c - p_m)$ . Annualised implicit rate of interest ( $R_1$ ) would therefore be

$$R_1 = \frac{[Q(P_M - P_C) + q (p_c - p_m)] 365 \times 100}{(B + q.p_c).T}$$

In such case therefore, the effective rate of interest ( $R$ ) on input loan is

$$R = \frac{[Q(P_M - P_C) + q (p_c - p_m)] 365 \times 100}{(B + q.p_c).T} + R_2 \text{ where } R_2 \text{ is the}$$

stipulated rate of interest on such loans.

### C. *Non-interlinked Loan Transaction*

Besides non-linked money -to-money loan transactions arranged through professional money-lenders, village shopkeepers, etc., where the standard methods of calculating explicit rates of interest apply, a separate method has to be evolved to handle non-linked transactions where both principal and repayment are in kind. This is non discussed.

In this category of non-interlinked credit, loan advance and repayment is made in terms of paddy. In our study it is observed in some cases that borrowers repay the exact equivalent amount of paddy to that which is borrowed, hence paying no interest, and in others that the repayment involves an additional amount of paddy over and above the principal. The monetary-equivalent for the latter grain-rate of interest is calculated as follows :

The difference between the principal quantity borrowed ( $Qp$ ) and the contracted quantity to be repaid ( $Qc$ ) i.e. ( $Qc - Qp$ ) equals the total grain-interest over the duration of loan. Crop loans of this kind are usually taken in the pre-harvest lean season when crop-price is generally high, and the loans are to be repaid immediately following the harvest when crop-prices decline. Because of this seasonal fluctuation in prices we get,  $P_1 > P_2$ , with the relevant paddy prices being  $P_1$  at the time of borrowing and  $P_2$  at the time of repayment. Therefore, the seasonal fluctuation in prices work to the disadvantage of the lender and to the advantage of the borrowers. However, the lenders generally fix the repayment quantity ( $Qc$ ) in such a way that it more than compensates the loss suffered from seasonal price fluctuation. Under this contracted arrangement, the whole mechanism, therefore, goes in favour of the lender. The total monetary equivalent of the interest realised by the lender is equal to  $(P_2 Qc - P_1 Qp)$ . Considering the duration of the loan, this interest in money terms can be annualised to the effective rate of interest ( $R$ ) which can be written as

$$R = \frac{(P_2 Q_c - P_1 Q_p) \times 365 \times 100}{P_1 \cdot Q_p \cdot T}$$

### Variation in the Study Region

On the basis of above formulations we have computed the mean effective rates of interest paid on linked and non-linked credit transactions according to size of holding as presented in Table 3.16.

**Table 3.16**  
**Mean Effective Rates of Interest Paid by Pure Owners on Linked and Non-Linked Borrowings in Cooch Behar (1990-91)**

Household Category	No. of Linked Borrowers	No. of Non-linked Borrowers	Mean Rates of Interest Paid by Non-Linked Borrowers	Mean Rates of Interest Paid by Linked Borrowers (percent per annum)		
				Stipulated Rates of Interest	Implicit Rates of Interest	Total Effective Rates of Interest
Sub-marginal	14	15	126.00	0	0	0
Marginal	11	12	88.57	44.00	94.27	138.27
Small	7	20	51.92	44.00	87.09	131.09
Medium	1	10	37.75	44.00	73.69	117.69
Large	0	6	0.00	-	-	-

The above table reveals that interlinkages do not require the sub-marginal cultivator-borrowers to pay any interest. Since it has been seen that such poorer borrowers opt for CL-linkages against loans of small size, this establishes that CL-type linkages do not entail any exploitative element at all. However, this class of cultivators does pay a very high mean rate of interest (126 percent) on non-linked credit transactions. For the other classes of cultivators, the rates of interest paid on linked transactions are much higher compared to those paid on non-linked transactions. For instance, the linked borrowers belonging to the marginal cultivator-category pay a mean rate of interest of 138.27 percent compared to the mean rate of 88.57 percent paid by non-linked borrowers in the same category. This character of linked *versus* non-linked credit transactions is seen to be common to all cultivator classes, excluding the labour-linked sub-marginal cultivators and the larger cultivators at the upper end (who however do not resort to any linked transactions at all). The overall conclusion emerging from the study is that the labour-linked borrowers do not face any exploitation whereas output-linked borrowers face usurious exploitation in the form of higher effective interest paid compared to the rate paid on non-linked credit transactions.

The CL-linkage resorted to by sub-marginal cultivators is sourced from neighbour-creditors who are an internal source of credit to the peasant economy. They are seen to have no usurious motive behind their lending operations, and usually lend money to secure future labour services from the borrowing labourer. The amounts of loans involved are not also very high since these are for consumption purposes. Local residency of the borrower appears to be an important consideration behind such loan-based linkage-operations, because this ensures fulfilment of the labour contract. As such, the labour-linked borrowers do not face any exploitation. However, output-linkages are carried on by the trader-creditors who are an external source of informal credit and as such are usurious in nature.

It is important to note that the mean rate of interest paid by the non-linked borrowers gradually declines with the economic status of the borrowers. The larger cultivators are relatively more creditworthy and hence can obtain credit at cheaper rates, also because loan principal and therefore total interest realisations are large in their case. Moreover, these cultivators are easily acceptable as borrowers to their neighbours and to their friends and relatives. Between these two sources, the neighbours are generally seen to charge lower rates of interest to larger cultivators whereas friends and relatives always advance interest-free goodwill loans to these borrowers. Total incidence of cheaper or interest-free loans is therefore higher for the larger cultivators. All these factors account for the decline in average rate of interest paid by non-linked borrowers as their economic status improves. We have found 6 large cultivators who have borrowed non-linked production loans from neighbours/friends and relatives without any rate of interest. We may further note that the mean effective rate of interest paid by the linked borrowers in the other categories also declines with the economic status of the borrowers. As the economic status of the output-linked borrowers (which excludes the sub-marginal category) increases, their bargaining position *vis-a-vis* the trader-interlockers improves and hence the effective rate of interest paid on linked borrowings declines.

### 3.9 The Character of Interlinkages Among Owner Cultivators

Three forms of interlinkages are found among the pure owners in the study region. These are namely CL, CO and CIO linkages. Of these, the CL-linkage is found to be prevalent among sub-marginal cultivators only, who are the weakest section in socio-economic terms *vis-a-vis* other categories of landowning cultivators. CO and CIO linkages, on the other hand, are observable among the marginal, small and medium cultivators whose crop-incomes are insufficient to finance all their production plans without external support from trader-creditors. The purposes of borrowing for these classes are different from those among sub-marginal cultivators. Whereas the relatively better-off cultivators borrow for production purposes, the latter borrow to meet consumption needs, and moreover, because of their relative poverty, are amenable to labour-linked credit to finance such needs. The proportion of households borrowing through interlinked transactions gradually falls with increase in the size of ownership holdings. The incidence of interlinkage therefore appears to be one of many manifestations of poverty in a peasant agrarian economy.

The CL-linkage as observed in our study area is sourced from the internal source of neighbour-creditors and do not entail any rate of interest. As such, no element of exploitation can be attributed to such linkages. Local residency of the borrowers appears to be an important consideration while advancing loans to them on labour-linked contracts. However, the CO/CIO linkage found among the marginal, small and medium cultivators, and carried on by the external source of trader-creditors, involve a usurious rate of interest which enhances surplus extraction from the village economy. This may therefore be held responsible for relative impoverishment of the poor peasants. It therefore follows that the internal sources of credit in a peasant economy while making an institutional arrangement with the local borrowers through instruments like CL-linkage, do not display any inherent tendency towards exploitation. In contrast, external entrants into the rural credit market generally engage borrowers on interlinked credit terms such as CO/CIO linkages that are deleterious to the peasants.

## Notes & References

1. cf. Lipton (1976); Ladman and Adams (1978); Griffin (1979); Braverman and Guasch (1986); Eswaran and Kotwal (1986)
2. Sarap (1991), p.54
3. *ibid.*
4. *ibid.*
5. *ibid.*
6. *ibid.*
7. *ibid.*
8. The small and marginal farmers have to incur extra costs (besides the nominal rate of interest) in the process of obtaining a loan from formal institutions. For example, many small and new borrowers are required to visit the formal institutions several times to negotiate loan, withdraw part of loan, make payments in installments, etc. These visits may often involve waiting for long hours and travelling long distances. The opportunity cost of borrowers' time used, travelling expences and costs incurred for getting a guarantor are some of the important factors considered while estimating transaction costs. The effective rate of interest (total cost of borrowing) paid by the small borrowers includes the nominal rate of interest and transaction cost. See also George *et al.*(1985)
9. *op.cit.*, Sarap, p.56
10. *ibid.*
11. Collaterals like promises to render labour services or to sell future output, are usually unmarketable (because of non-availability of readily established markets in and around the villages) and therefore unacceptable as collateral in the organised market.
12. *op. cit.*, Sarap, p.99
13. Zusman (1989), p. 297
14. *ibid.*
15. Bell & Srinivasan (1989), p. 221
16. Bhaduri (1983), pp. 52-55

## CHAPTER 4

### AGRARIAN INTERLINKAGES AMONG TENANT CULTIVATORS

#### 4.1 Issues in Tenancy

Moving on now to tenant cultivators i.e. cultivators working leased-in lands, the present chapter deals with different aspects of the tenancy relation as seen in our study area, with particular focus on the interface of tenant cultivators with the rural credit market. Although the theoretical literature on tenancy in agriculture has increased in volume over time, the number of empirical studies relating to interlinked transactions among the tenants of peasant economies is relatively few. The analysis in the chapter is therefore designed to capture different forms of interlinkages that may exist between landlease, labour, credit and product markets for the sub-sample of 117 tenant cultivators selected from the study region in Cooch Behar district.

As noted earlier, the agrarian economy of Cooch Behar is characterised by the peasant mode of cultivation. The 'Operation Barga' programmes of tenancy reform launched in Cooch Behar along with other districts of the state since 1977 have also consolidated the peasant economy mode of the region and as such tenancy relations in the study area have therefore been subject to some change.

Thus the present chapter makes an attempt to capture intrinsic features of tenancy relations existing in our study area. Issues like Operation Barga have to be considered against the background of land tenurial systems seen in our sample data. This same background also determines the access of the tenant cultivators to the rural credit market, which is examined here.

#### 4.2 Socio-Economic Status

Table 4.1 shows the distribution of tenants according to size group of ownership holding. This will reveal the position of the tenant households in the land-owning hierarchy.

**Table 4.1**  
**Size Group Distribution of Ownership Holdings of Tenants**

Region	Size Group (in acres)	Number of Households	Owned Area	Average Area
I	0.00	2 (3.22)	-	-
	0.01-1.25	27 (43.55)	12.15 (10.78)	0.45
	1.26-2.50	16 (25.81)	23.68 (21.02)	1.48
	2.51-5.00	11 (17.74)	39.82 (35.34)	3.62
	5.01-7.00	6 (9.68)	37.02 (32.86)	6.17
	Total	62 (100.00)	112.67(100.00)	1.82
II	0.00	1 (1.82)	-	-
	0.01-1.25	32 (58.18)	11.84 (17.03)	0.37
	1.26-2.50	12 (21.82)	16.92 (24.34)	1.41
	2.51-5.00	7 (12.73)	22.96 (33.00)	3.28
	5.01-7.00	3 (5.45)	17.79 (25.59)	5.93
	Total	55 (100.00)	69.51 (100.00)	1.26

*Note : Figures in parentheses are percentages to total.*

**Source : Field Investigation**

From Table 4.1 we observe the following points : Firstly, there are very few pure tenants in our study region. Only 2 out of 62 tenants in Region-I and 1 out of 55 tenants in Region-II are pure tenants<sup>1</sup>. This implies that majority of the tenant households in our sample are mixed tenants<sup>2</sup> having some land of their own. This might reflect the lessor's preference for a landed tenant having better farming experience who can provide greater security of obtaining rent.<sup>3</sup> Secondly, it is found that majority of the tenant households (in both regions) belong to the ownership classes of less than 2.51 acres, with greater concentration in the class of 0.01-1.25 acres. Around 73 percent of the tenants in Region-I and 82 percent in Region-II belong to the ownership classes of less than 2.51 acres of land. This indicates that households with inadequate land at their disposal in a peasant-subsistence economy are more under compulsion to increase their scale of operation by leasing in land from others. It is also found from the table that 27.42 percent of the tenants in Region-I belong to the ownership classes of more than 2.50 acres. The corresponding figure for Region-II is however 18.46 percent only. This indicates that the households belonging to the higher classes (more than 2.50 acres) in Region-I are more interested in increasing the scale of cultivation to take advantage of better conditions of production prevailing in Region-I. The lessors who lease out lands to such tenants in the study region are seen to be largely drawn from among the 'small', 'medium' and 'large' classes among the owner cultivator.

The information on operational holdings and area operated by the tenants is presented in the following table. The employment potential and earning capabilities of the tenants are determined by the size of operational holdings.

**Table 4.2**  
**Size Group Distribution of Operational Holdings of Tenants**

Region	Size Group (in acres)	Number of Households	Area Operated	Average Area Operated	Average Area Leased-in
I	0.01-1.25	17 (27.42)	9.01(06.62)	0.53	0.18
	1.26-2.50	22 (35.48)	30.14(22.13)	1.37	0.32
	2.51-5.00	16 (25.81)	54.72(40.18)	3.42	0.78
	5.01-7.50	7 (11.29)	42.31(31.07)	6.04	0.92
	Total	62(100.00)	136.18(100.00)	2.20	0.38
II	0.01-1.25	23 (41.82)	11.04(12.69)	0.48	0.23
	1.26-2.50	18 (32.73)	23.76(27.32)	1.32	0.27
	2.51-5.00	10 (18.18)	29.80(34.26)	2.98	0.43
	5.01-7.50	4 (07.27)	22.38(25.73)	5.60	0.81
	Total	55(100.00)	86.98(100.00)	1.63	0.32

*Note : Figures in parentheses denote percentages to total.*

**Source : Field Investigation**

From Table 4.2 we find that a vast majority of tenant households in both regions belong to the operational classes of less than 2.50 acres. Therefore, our study area is dominated by tenants with very low cultivating status in the landlease market.

However, incidence of tenants operating more than 2.50 acres of land seems to be higher in the better irrigated Region-I compared to those in relatively poor irrigated Region-II showing that the tenants too derive benefits from irrigation.

The average leased-in area in both regions are extremely small with average leased-in holdings increasing from lower to upper tenant categories. Tenants in the latter categories also resort to

additional leasing-in during Rabi/Boro seasons, especially in Region-I which is better irrigated. Average holdings operated by tenants for Region-I is also higher than that in Region-II, again because of better irrigation. It will be seen later that tenants in Region-I also more heavily depend on production loans from trader-sources, because of having a larger commitment of their outputs to landlords as tenancy crop-shares. The average holding size for the lowest land class among tenants operating less than 1.26 acres of land is too small to support subsistence needs. This class, although technically being classified as tenants, is largely dependent on labouring activity, almost to the extent of the landless, and can not undertake extended production activity because of the smallness of its holdings. It will be seen later that this factor also reflects in the pattern of interlinked credit transactions made by this class.

To get some idea about the social status of the tenant cultivators we consider their distribution according to caste/religion and levels of education. The following table shows the distribution of tenants according to caste/ religion by size group of holding.

**Table 4.3**  
**Distribution of Tenants According to Caste/Religion by Size-Group of Ownership Holding**

Region	Size Group (in acres)	Number of Tenants	Scheduled Caste	Mohammedan	Upper Caste
I	0	2	2(100.00)	0(00.00)	0(00.00)
	0.01-1.25	27	16(59.26)	5(18.52)	6(22.22)
	1.26-2.50	16	7(43.75)	4(25.00)	5(31.25)
	2.51-5.00	11	3(27.27)	2(18.18)	6(54.55)
	5.01-7.50	6	1(16.67)	1(16.67)	4(66.66)
	Region Sub-total	62	29(46.77)	12(19.36)	21(33.87)
II	0	1	1(100.00)	0(00.00)	0(00.00)
	0.01-1.25	32	18(56.25)	10(31.25)	4(12.50)
	1.26-2.50	12	3(25.00)	2(16.67)	7(58.33)
	2.51-5.00	7	1(14.29)	2(28.57)	4(57.14)
	5.01-7.50	3	0(00.00)	1(33.33)	2(66.67)
	Region Sub-total	55	23(41.82)	15(27.27)	17(30.91)
<b>Total</b>		<b>117</b>	<b>52(44.44)</b>	<b>27(23.08)</b>	<b>38(32.48)</b>

*Note : Figures in parentheses denote percentages of row totals.*

**Source : Field Investigation**

It is observed from Table 4.3 that over the entire sample region 44 percent of the tenants are SCs, 23 percent are mohammedan and 32 percent belong to the 'upper castes'. If we consider the caste/ community -wise distribution among tenants *vis-a-vis* pure owners, we see that whereas the latter are SC (i.e. Rajbanshi) dominated, the former has a larger proportion of muslims and other Hindu upper castes. This section, in the study region, largely comprises post-partition migrants who have settled the area few years back.

We now want to study the level of education of the tenant cultivators which is shown in Table 4.4.

**Table 4.4**  
**Distribution of Tenant Cultivators According to Educational Level by**  
**Size-group of Ownership Holding**

Region	Size Group (in acres)	Number of Households	Illiterate	Upto Primary	Above Primary & Below Middle	Upto Secondary	Upto Graduate
I	0.00	2	2 (100.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
	0.01-1.25	27	17 (62.96)	10 (37.04)	0 (0.00)	0 (0.00)	0 (0.00)
	1.26-2.50	16	5 (31.25)	7 (43.75)	3 (16.75)	1 (6.25)	0 (0.00)
	2.51-5.00	11	2 (18.18)	5 (45.46)	2 (18.18)	2 (18.18)	0 (0.00)
	5.01-7.50	6	1 (16.67)	1 (16.67)	2 (33.33)	1 (16.67)	1 (16.67)
	Region Sub-total	62	27(43.54)	23(37.09)	7(11.29)	4(6.45)	1(1.61)
II	0.00	1	1 (100.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
	0.01-1.25	32	23 (71.87)	9 (28.13)	0 (0.00)	0 (0.00)	0 (0.00)
	1.26-2.50	12	7 (58.34)	4 (33.33)	1 (8.33)	0 (0.00)	0 (0.00)
	2.51-5.00	7	3 (42.87)	2 (28.57)	1 (14.28)	1 (14.28)	0 (0.00)
	5.01-7.50	3	0 (0.00)	1 (33.33)	0 (0.00)	2 (66.67)	0 (0.00)
	Region Sub-total	55	34(61.82)	16(29.09)	2(3.64)	3(5.45)	0(0.00)
Total Sample		117	61(52.15)	39(33.33)	9(7.69)	7(5.98)	1(0.85)

*Note : Figures in parentheses are percentages of row totals.*

**Source : Field Investigation**

It is seen from the above table that the level of absolute illiteracy is highest among the pure tenants (100 percent). However, it falls gradually with the increase in the size of landholding. Only 16.67 percent of the medium tenants (ownership class : 5.01-7.50) in Region-I are illiterate while there is no illiteracy among the medium tenants in Region-II. The incidence of higher education among the tenants is very low. Only one tenant in Region-I reported having studied up to graduation level.

A comparison of the educational status of the tenants and pure owners would reveal that the level of illiteracy is higher among the tenants (52.15 percent) in our study area compared to that of the pure owner cultivators (46.19 percent). Another notable point is that a larger percentage of literates among the tenants have failed to go beyond the primary level education. For example, about 37 percent of the pure owners have attained the level of education beyond the primary level compared to a figure of only 15 percent for the tenants.

### 4.3 Some Aspects of Tenancy Relations

#### 4.3.1 Recording of Barga Rights

On assuming power in 1977, the Left Front Government in West Bengal launched the programme of Operation Barga (OB) for recording tenancy rights to sharecroppers in order to organise them in their

struggle against rural vested interests. In the context of West Bengal, it is often argued that the political mobilisation of tenants by the Left Parties in recent years have been able to alter the old character of tenancy and reset the terms and conditions of tenancy in favour of the tenants. This may be examined now.

As regards the exact number of bargadars in West Bengal, there is no unanimity of opinion. Government statistics indicate an average holding of 0.97 acres with a total statewide area of 2.5 million acres under barga cultivation. Therefore, the barga should number over 2.5 million.<sup>4</sup> The Land Revenue Minister once spoken of there being 3 million bargas in West Bengal, while the Commissioner for Agriculture and Community Development in West Bengal says that they are 3.3 million.<sup>5</sup> According to an official estimate, the total number of recorded bargadars are 1.43 million as on November, 1990.<sup>6</sup>

Therefore, there still exist a large number of tenants who have not chosen to get themselves recorded as tenants. Consequently, such tenants are involved in what may be termed as traditional form of tenancy arrangement. The tenancy relations of the unrecorded tenants are traditional in the sense that they enjoy no protection against unwarranted upward revision of rent by the landlords and no security of tenure and as such, may be evicted at the will by the landlords.

Mere recording the names of the bargadars will not be meaningful unless their rights are protected in the post-recording period. A survey conducted by the West Bengal Land Reforms Office found that : "11.22 percent of the recorded bargadars have been thrown out of possession by one way or the other ..... There is no reason to believe that the bargadars ... have given up their barga rights willfully. Rather the only presumption is that they have been forced to surrender their rights out of fear in the face of intimidation and coercion (whether direct or indirect)".<sup>7</sup> If this rate of eviction becomes general, the success which may have achieved by the OB programme will vanish away in near future.

In West Bengal, the more usual type of tenancy arrangement is that of sharecropping. The four village survey by Kirsten Westergaard indicates that even when registration takes place, the traditional tenancy practice where the tenants gets a lower cropshare is generally found<sup>8</sup>. An ILO sponsored survey of fourteen West Bengal Villages found that among recorded sharecroppers the legally stipulated 3/4 crop share was observed in some cases only in one village, though all those villages had some recorded sharecroppers.<sup>9</sup> Thus it may be said of the problems of tenancy in West Bengal, that there is no precise estimate of the number of tenants (sharecroppers), that large number of such persons have chosen not to record tenancy, that evictions continue to take place, and that existing cropsharing arrangement exceed the statutory share payable to landlords.

It has been alleged that the Operation Barga programme has consolidated the hold of big share croppers who lease in land from small landholders. During the regime of the Left Front Government in West Bengal, the middle level peasantry cultivating 2.5 to 7.5 acres of lands has become more politically active and influential, and as the prime beneficiaries of Operation Barga, support the Left Front. The poor sharecroppers, with little or no land of their own, are generally left out of the barga-recording programme due to their fear and dependence on the propertied class. The middle level peasantry are now seen to control the most powerful rural organisation of the farmers named as *Kisan Sabha* as well as the *Panchayati Raj* institutions in the state. On account of political barriers from the middle level peasantry who control the reins of local bodies at the grass root level, the progress of barga recording had been slowed down.<sup>10</sup>

However, the World Bank has assessed that the tenancy reforms in West Bengal are "successful".<sup>11</sup> Recent statistical evidence also shows a rising agricultural productivity and output which is attributed to the implementation of land reforms. Since the present chapter addresses tenant cultivators specifically it would be interesting to develop some idea of issues such as these, as they apply in the study region. Thus the behaviour of the middle group of tenants is of special interest in the following analysis.

The recording of barga rights among the tenants in the study villages is not very high. Only 22.22 percent of the tenants included in our sample officially record their names, leaving 77.78 percent of them under non-legalised form of tenancy.

**Table 4.5**  
**Recorded Tenancies in the Study Region Under Operation Barga**

Class of Tenants	Number of Tenants	Unrecorded Tenants	Reasons for Non-recording		
			Long-standing Good Relation	Seasonal Nature of Tenancy	Fear of Eviction
Landless	3	3(100.00)	3	-	-
Sub-marginal	59	52(88.14)	32	12	8
Marginal	28	18(64.18)	13	2	3
Small	18	11(61.11)	-	11	-
Medium	9	7(77.78)	-	7	-
Total	117	91(77.78)	48	32	11

*Note : Figures in parentheses denote percentages of row totals.*

**Source : Field Investigation**

There are 3 explicitly stated reasons for such high rate of non-recording. 32 out of 91 unrecorded tenants (i.e. 35 percent) stated that seasonal nature of tenancy arrangement has been responsible for non-recording. The landlords in such cases are seen to change the plot of land allotted to the tenants in every season so that the attachment of a tenant to a particular plot of land becomes seasonal. This type of seasonal tenancy arrangement in our study area is a natural outcome to evade the provisions of Tenancy Act which empowers the tenant to record his rights to operate the tenanted land on a secured basis. 48 tenants reported that they did not opt for recording to maintain long-standing good relations with the landlords. However, only 11 tenants stated that they feared eviction, had they tried to record their rights. The overall picture seems to indicate that it has been a voluntary decision by a large section of tenants not to go in for recording. We therefore find no direct evidence to substantiate that the semi-feudal authority of the landlords prevented the tenants from recording their names.

#### 4.3.2 Tenurial Arrangement

The tenurial arrangement considered in this section pertain to the production of different crops in the lease-hold lands. We have 113 cases of production in Region-I and 84 cases in Region-II in the lease-hold land as reported by the tenants.

##### *Crop-Share*

As in other parts of West Bengal, sharecropping is the dominant form of production in our study area. Out of 113 cases of production, only 20 cases have been reported to be under fixed rent tenancy in Region-I and out of 84 cases of production in Region-II, only 8 cases have been reported to be under fixed rent tenancy. Therefore, for the two sample regions as a whole, about 14 percent of the total cases of production are under fixed rental tenancy and the rest, about 86 percent of the cases of production are under sharecropping arrangements (Table 4.6). Sharecropping is thus the principal form of tenancy arrangement in our study area.

The most remarkable thing about cropshare is that they show an extraordinary tendency of clustering around some fixed proportions. Using data for 110 villages in the state of West Bengal, Bardhan and Rudra observed as many as 11 different types of cropshares prevailing in 1975-76. The number of

cropshare variants has tended to decline in recent years. In a recent study (1979-80) in the district of Nadia of West Bengal, Khasnobis and Chakravarty have found only four types of cropshares. In another study (1981-82) Chattapadhyay and Ghosh have also found 3 forms of cropshares in the *terai* area of Darjeeling district. In the villages surveyed by us, we found 3 different forms of cropshare where crops are shared between the tenants and the landlords on the basis of three different forms i.e. 50:50, 75:25, 67:33.

The dominant form of cropsharing arrangement in our study area is the 50:50 division of the produce. 122 out of 169 cases of production under share tenancy (i.e. 72.19 percent) have reported a 50:50 division of output between the tenant and the landlord. This system of tenancy where the tenants used to get half of the produce, is known locally as *Adhiary System* and the sharecroppers in this case are known as *Adhiars*. Other arrangements account for low percentages of the total. Thus 67:33 share proportion between the landlord and the tenant has been observed in 19 cases and 75:25 share proportion in 28 cases. These two cases together constitute 27.84 percent of the total cases under sharecropping. It should be noted that we did not find a single case where the tenant's share was less than 50 percent of the produce.

Sharecropping is also the principal form of tenancy in case of HYV crop production. 7 out of 21 cases of production of HYV crop in Region-I have reported to be under fixed rental system. In Region-II, however, all the 3 cases of HYV production are under sharecropping. For the two sample regions as a whole, 7 out of 24 cases of production of HYV Crop are under fixed rental system, leaving 17 cases of HYV production under sharecropping arrangements. Out of these 17 cases of HYV production under sharecropping arrangements, crops are divided in 50:50 ratio in 7 cases. Therefore, 10 out of 17 cases reported more than 50 percent shares for the tenants.

#### *Cost-Share*

Cost-sharing in our study area, if any, is confined to the costs of inputs, viz., seed, fertilizer, insecticides and irrigation. The cost of all other inputs is the responsibility of the tenants. Moreover, the pattern of cost-sharing has not been uniform for all crops as also between landlords. The incidence of cost-sharing by the landlords has been very low in our study area. In 79 out of 113 cases of production in Region-I and 62 out of 84 cases of production in Region-II, cost-sharing does not exist. All the costs are borne by the tenants. Therefore, only in 28.47 percent of the total cases of production, cost sharing exists. Cost-sharing is said to exist when the landlords shared in any of the costs in fertilizer, insecticides, pesticides and irrigation.

**Table 4.6**  
**Association Between Crop Shares and Cost Shares**

Crop Share (Tenant : Landlord)	Region-I			Region-II		
	Landlord's Participation in Costs			Landlord's Participation in Costs		
	Exists	Does not Exist	Total Cases	Exists	Does not Exist	Total Cases
50:50	31(7)	37	68(7)	21	33	54
67:33	2	7	9	1	9	10
75:25	-	16(7)	16(7)	-	12(3)	12(3)
Fixed Amount (crop)	1	5(1)	6(1)	-	2	2
Fixed Amount (cash)	-	14(6)	14(6)	-	6	6
Total	34(7)	79(14)	113(21)	22	62(3)	84(3)

*Note : Figures in parentheses indicate the adoption of HYV crop (Boro-a spring paddy).*

### Crop-Share and Cost-Share

As per the prevailing Tenancy Act in the state of West Bengal, the landowners are entitled to get 25 percent of gross produce on their leased-out land in the event of non-participation in cost. However, they are entitled to get 50 percent of gross produce if they supplied all inputs other the labour (i.e. plough, cattle, manure, seeds and other inputs necessary for cultivation). But as Table 4.6 indicates, a fairly large number of cases do not conform to the crop-sharing and cost-sharing arrangement proposed by Tenancy Laws (which prescribed a 25 percent share for the landlords in the event of non-participation in Cost). In only 28 cases, the tenants received the prescribed share of 75 percent when the landlords do not participate in cost-sharing. Out of 56 cases where cost-sharing exists, we found 52 cases where output was distributed in 50:50 ratio between the landlords and the tenants. But in most of the cases where cost-sharing exists, the proportion of cost borne by the landlords is much lower than what is prescribed in the tenancy laws. The overall picture therefore seems to indicate that in a vast majority of cases the tenants do not get the legally stipulated crop-share.

#### 4.4 Access to Rural Credit Market

Having discussed the tenurial relations existing in the study area, we now move on to the access of the tenant cultivators to the rural credit market. As noted earlier, the rural credit market is of two types : organised and unorganised. The organised credit sector consists of a number of formal lending institutions like Cooperatives, Commercial Banks, Land Development Banks, etc. while the unorganised or informal rural credit sector includes a number of private individuals like cultivators, neighbours, friends and relatives, professional money-lenders, shopkeepers, etc.

Credit is necessary for the working capital requirements as well as consumption needs of the tenants. The non-availability or inadequate availability or untimely availability of credit may pose an extremely critical obstacle to agricultural development. It is, therefore, necessary to examine the position of the tenants in the rural credit market of the study area which is shown in the table below.

**Table 4.7**  
**Distribution of Sources of Credit by Various Classes of Tenant Households**

Region	Class of Tenants	Tenants Receiving Credit from			Total Indebted Tenants	Total No. of Tenants	Ratios		
		Institution only	Private only	Both Institution & Private			Ratio of Indebted Tenants	Ratio of Institutionally Indebted Tenants	Ratio of Privately Indebted Tenants
		(1)	(2)	(3)	(4)	(5)	[(4) as % of (5)]	[(1) + (3) as % of (5)]	[(2) + (3) as % of (5)]
I	Landless	-	2	-	2	2	100.00	0	100.00
	Sub-marginal	1	12	5	18	27	66.67	22.22	62.96
	Marginal	4	6	2	12	16	75.00	37.50	50.00
	Small	5	3	1	9	11	81.89	54.54	36.36
	Medium	3	1	2	6	6	100.00	83.33	50.00
	Total	13	24	10	47	62	75.81	37.09	54.84
II	Landless	-	1	-	1	1	100.00	0	100.00
	Sub-marginal	3	11	3	17	32	53.12	16.75	43.75
	Marginal	3	4	1	8	12	66.67	33.33	41.67
	Small	4	1	1	6	7	85.71	71.43	28.57
	Medium	1	-	2	3	3	100.00	100.00	66.66
	Total	11	17	7	35	55	63.64	32.73	43.64

Note : Col. 7 & Col. 8 do not add up to Col. 6 because of certain households having received loans from both institutional and private sources.

Source : Field Investigation

Table 4.7 shows that about 76 percent of the tenants in Region-I and 64 percent in Region-II enter into the rural credit market as recipients of loans. This implies indirectly a high degree of credit requirement on the part of the tenants. However, indebtedness among the tenants is slightly lower compared to the pure owners. The landless tenants, though very few in number, are all indebted in both regions. The ratio of indebtedness among the sub-marginal tenants is about 67 percent in Region-I and 53 percent in Region-II. This ratio gradually increases and ultimately becomes highest (100 percent) for the medium tenants in both regions. This does not however indicate that the credit-requirement of the smaller tenants is lower compared to the larger tenants. In fact, the smaller tenants get less credit because they are less credit-worthy.

Only 37 percent of the tenants in Region-I and 33 percent of the tenants in Region-II report having received loans from formal credit institutions in the reference year (col. 7). This indicates the inadequacy of institutional credit obtained by tenant households. The incidence of institutional credit is much lower among the tenants compared to the pure owners in our sample. It is however clear that the percentage of institutionally indebted tenants increases in both regions with the size of ownership holding, as in the case of pure owners seen in the preceding chapter. Since the procedure followed in the formal credit market is very bureaucratic, many tenant households cannot satisfy the conditions of borrowing. The high transaction costs associated with formal loans, the patronage, arbitrariness and corrupt practices followed by financial institutions further limit the access of poor tenants to formal credit. It is important to note that the landless tenants in our sample are denied access to formal credit institutions.

It is observed from the table that about 55 percent of the tenants in Region-I and 44 percent in Region-II are privately indebted. The proportion of privately indebted tenants declines with an increase in the size of holding (up to 5.00 acres) but then rises for the medium tenants (col.8). In other words, this proportion does not fall systematically with size, as in the case of pure owners seen in the earlier chapter. Comparing col. 7 and col. 8 we can say that informal (private) sources of credit still dominate the formal sources. This point is supported by both policy-makers and academicians.

#### 4.5 Typology of Informal Loans

Informal (private) loans have been classified into two broad categories : consumption and production loans. The following table shows the typological break-up of informal loans for 34 tenant households in Region-I and 24 households in Region-II.

**Table 4.8**  
**Type-wise Break-up of Credit from Informal Sources**

Region	Class of Tenants	Consumption Loan	Production Loan	Both	Total
I	Landless	2	-	-	2
	Sub-marginal	16	1	-	17
	Marginal	1	4	3	8
	Small	1	1	2	4
	Medium	-	3	-	3
	Total	20(58.83)	9(26.47)	5(14.70)	34(100.00)
II	Landless	1	-	-	1
	Sub-marginal	11	2	1	14
	Marginal	3	1	1	5
	Small	1	1	-	2
	Medium	-	2	-	2
	Total	16(66.67)	6(25.00)	2(8.33)	24(100.00)

Source : Field Investigation

It is observed from Table 4.8 that an aggregate of about 74 percent of the tenants in Region-I received consumption loans against which the corresponding figure for production loans is about 41 percent. Similarly, an aggregate of 75 percent of the privately indebted tenants in Region-II reported their recourse to consumption loans compared to 33 percent for production loans. For the tenant cultivators as a whole consumption needs therefore dominated over production needs as in the case of pure owners seen in the earlier chapter. It is also seen that the incidence of consumption loans among the tenants in Region-I and Region-II is almost same although the importance of production loans is seen to be higher in Region-I which is relatively better irrigated. In terms of relative importance of consumption loans, we observe that there is a higher incidence of consumption loans among the tenants compared to the pure owners which implies a relatively higher level of poverty among the former. The demand for production loans among the pure owners is however higher compared to that of the tenants in our sample.

The behaviour of different classes of tenants in respect of their involvement in production and consumption loans is also different. While the landless tenants are not seen to require production loans, the medium tenants reported their dependence on production loans only. The incidence of consumption loan is highest down the economic scale among the landless tenants and falls gradually with the economic status of the tenants. It therefore appears that while the relatively smaller tenants borrow in order to subsist, the relatively larger tenants borrow in order to produce.

#### 4.6 Sources of Informal Loans

In addition to the traditional sources of informal loans in our study area, a tenant may also avail of loans from his own landlord. A typical tenant in our study area therefore faces six sources of loans i.e. his own landlord, traders, neighbours, friends and relatives, professional money-lenders and village shopkeepers.

The source-wise break-up of production loans for 14 tenants in Region-I and 8 tenants in Region-II is shown in Table 4.9

**Table 4.9**  
**Source-wise Break-up of Production Loan from Informal Sources**

Region	Class of Tenants	Number of Tenants Receiving Production Loans	Number of Tenants Receiving Production Loans from				
			Own Landlord	Traders	Neighbours	Friends & relatives	Professional Money-lenders
I	Landless	-	-	-	-	-	-
	Sub-marginal	1	-	-	1	-	1
	Marginal	7	-	6	1	1	2
	Small	3	-	3	-	-	1
	Medium	3	-	1	2	-	-
	Region Sub-total	14	0(0.00)	10(71.43)	4(28.57)	1(7.14)	4(28.57)
II	Landless	-	-	-	-	-	-
	Sub-marginal	3	-	-	-	-	3
	Marginal	2	-	2	-	-	1
	Small	1	-	1	1	-	-
	Medium	2	-	2	1	-	-
	Region Sub-total	8	0(0.00)	5(62.5)	2(25.00)	0(0.00)	4(50.00)
Total Sample	22	0(0.00)	15(68.18)	6(27.27)	1(4.54)	8(36.36)	

Note : Figures in parentheses denote percentages to total. With some households utilising more than one sources over the reference year, the percentages need not add up to 100.

Source : Field Investigation

The importance of various sources of production loan among the tenants is revealed by Table 4.9. As in the case of pure owners, traders are the most important source of production loans to the tenants. Around 68 percent of the tenants report having received production loan from the traders. The next in order of importance are the professional money-lenders (sourcing 36 percent), followed by neighbours (27 percent) and friends and relatives (5 percent). None of the tenants in our sample reported having received production loans from their own landlords. As expected, the importance of trader-sourced loans is higher in Region-I which is relatively better irrigated. It also appears from the table that internal sources (landlord, neighbours and friends/relatives) play a very weak role in providing production loans to the tenants compared to the external sources (such as, traders, professional money-lenders). The tenants are therefore more exposed to usurious exploitation.

Considering now the borrowing for consumption purposes, source-wise break-up of consumption loan for 25 tenants in Region-I and 18 tenants in Region-II is shown in Table 4.10.

**Table 4.10**  
**Source-wise Break-up of Consumption Loan from Informal Sources**

Region	Class of Tenants	No. of Tenants Receiving Consumption Loan	Number of Tenants Receiving Consumption Loan from				
			Own Landlord	Neighbours	Friends & relatives	Professional Money-lenders	Shopkeepers
I	Landless	2	2	-	-	-	-
	Sub-marginal	16	-	12	4	3	4
	Marginal	4	-	3	-	1	2
	Small	3	-	1	-	3	-
	Medium	-	-	-	-	-	-
	Region Sub-total	25	2(8.00)	16(64.00)	4(16.00)	7(28.00)	6(24.00)
II	Landless	1	1	-	-	-	-
	Sub-marginal	12	-	7	2	1	2
	Marginal	4	-	3	1	2	-
	Small	1	-	-	-	1	-
	Medium	-	-	-	-	-	-
	Region Sub-total	18	1(5.55)	10(55.55)	3(16.67)	4(22.22)	2(11.11)
Total Sample		43	3(6.98)	26(60.46)	7(16.28)	11(25.58)	8(18.60)

*Note : Figures in parentheses denote percentages to total. With some tenant households utilising more than one sources over the reference year, the percentages need not add up to 100.*

**Source : Field Investigation**

Table 4.10 reveals neighbours to be the most important source of consumption loans to tenants. Out of 43 tenant cultivators receiving consumption loans from informal sources, 26 tenants (60 percent) source these from neighbours, 11 tenants (26 percent) from professional money-lenders. 8 tenants (19 percent) from village shopkeepers, 7 tenants (16 percent) from friends and relatives and only 3 (7 percent) from their own landlords. Except the neighbours, all other internal sources (i.e. landlords, and friends/relatives) are therefore relatively unimportant. Of the two external sources, professional money-lenders appear to be the most important source of consumption loans since they cover a larger percentage of tenant-borrowers.

#### 4.7 Landlords as a Source of Interlinkage

##### 4.7.1 Tenancy-Credit Linkage

The landlord as a source of informal loan attracts special attention from both theoretical and empirical counts. In a less developed economy landlease market has always a tendency to interlock with

credit and other markets. While a collateral-poor tenant may not have access to outside credit market, his landlord would accept the tenancy contract itself as collateral. The landlord has therefore the incentive to provide both production and consumption loans and he is also in a position to enforce repayment at the time of harvest.

There are two contrasting views regarding the nature and impact of tenancy-credit linkage. According to one view, interlinkage between landlease and credit markets acts as a means of exploitation of the poor tenants by the exploiter-landlords.<sup>12</sup> The other view rejects the exploitative nature of interlinkage and explains its rationale in terms of information asymmetry which creates moral hazard problem and hence makes monitoring of tenants costly for the landlords. Some kind of linkage (say, between landlease and credit contracts), would therefore be helpful for improving allocative efficiency and also welfare of the contracting parties.<sup>13</sup> Both of these views are based on implicit assumption that tenants are poor and the landlords are rich land-owning class and that the poor tenants depend on the landlords for lease-contract and also credit-support to meet their consumption and /or production needs. However, in the absence of class of really "large" landholders in the peasant economy of our study area, the lessors have neither the capacity nor willingness to participate in credit transactions with the tenants. Under these circumstances, we can expect that the transaction between the landlord and the tenant is confined to landlease market only.

Observations from our field-study also satisfy our expectations. None of the tenants in our sample reported having received production loans from their own landlords (Table 4.9). Almost identical picture is also discernible in case of consumption loans where only 2 landless tenants in Region-I and one landless tenants in Region-II have received loans for consumption purposes from their own landlords (Table 4.10). Therefore, the role of landlords as a loan-giver to the tenants is not very important in our study area. The phenomenon of tenancy-credit linkage is exclusively confined to the landless tenants. None of the landowning tenants in our sample had made any loan transaction with their landlords in the reference year. It therefore follows that the interlinkage between tenancy and credit contracts is very weak in our study area.

Some scholars<sup>14</sup> have projected tenancy as a semi-feudal institution which inhibits agricultural modernisation. Amit Bhaduri explained this phenomenon by the existence of interlinkage between landlease and credit markets. According to Bhaduri, landlords usually maintain usurious nexus with the tenants. The income earned by the landlord from usury is supposed to be much higher than the income from productive investments. Thus the usury income earned from the indebted tenant hampers the landlord's incentive to invest in productive investments.

Our survey results however do not support Bhaduri's proposition. Firstly, the informal credit market in the survey area is dominated not by the landlords (as assumed by Bhaduri) but by other loan-sources like neighbours, friends and relatives, traders, professional money-lenders, shopkeepers, etc. Secondly, the landlords were not found to charge any rate of interest from the indebted landless tenants during the period of investigation. The question of usury nexus between the landlords and the tenants therefore does not arise. A model of agrarian backwardness should therefore be based on some explanatory factors other than interlinkage between tenancy and credit contracts.

#### 4.7.2 Tenancy-Labour Linkage

There is, however, some evidence of interlinkage between landlease and labour contracts. Some tenants, being drawn largely from agricultural labour families, are offered landlease contract with the understanding that they would provide labour services for the cultivation of self-operated land by the landlords. The information is put in the following table.

**Table 4.11**  
**Interlinkage Between Landlease and Labour Contracts**

Region	Class of Tenants	No. of Tenants	Tenants Obtaining Lease-contract against Pre-committed Labour	Tenants Working for Landlord		Tenants Providing Unpaid Services to the Landlords
				At MWR	Below MWR	
I	Landless	2	2	2	-	-
	Sub-marginal	27	9	9	-	-
	Marginal	16	-	-	-	-
	Small	11	-	-	-	-
	Medium	6	-	-	-	-
	Total	62	11	11	-	-
II	Landless	1	1	1	-	-
	Sub-marginal	32	-	-	-	-
	Marginal	12	-	-	-	-
	Small	7	-	-	-	-
	Medium	3	-	-	-	-
	Total	55	1	1	-	-

*Note : MWR = Market Wage Rate*

**Source : Field Investigation**

From Table 4.11 it is observed that all the landless tenants and one-third of the sub-marginal tenants in Region-I are involved in tenancy-labour linkage (TL). This type of linkage is however seen to be confined only to the landless tenants in Region-II. The overall picture therefore seems to indicate that the households with little or no land at their disposal are generally preferred by the landlords for such linkages. Such linkages are higher in Region-I than in Region-II since Region-I experiences a higher profile of demand for labour throughout the year. Since Region-I is relatively better irrigated, demand of land for lease-contract tends to be higher for them those who do not have any land at all or have marginal land at their disposal. The pressure of higher land-demand on the part of poorer peasants, pushes some of them into such tenancy arrangement which is also matched by the landlord's need for pre-committed and assured labour in order to pursue his own cultivation plans.

This type of labour-tying arrangement through landlease contract should not however be interpreted as traditional landlord-serf relationship typical of feudal agrarian relations. An essential feature of feudalism recognised by different scholars is the *extra-economic coercion* that it involves. But so far as labour market is concerned, we did not find a relation between the landlords and the tenants which are extra-economic in nature. All such tenants report having received wages at the prevailing market rate and no one was found to provide unpaid or underpaid (non-farm) services to the landlords. Such tenants can enter into the free-labour market when there is no pre-committed works with their landlords. However, this does not mean that they are 'unfree' labourers, just as any job-holder is not 'unfree', inspite of not being immediately free to switch jobs, because of economic reasons. Under the tenancy-labour linkage (TL), the tenants depend on the landlords for their lease-contracts in lieu of which they contract to work for the landlord against due payment. This interdependence/ voluntary exchange arises purely from economic consideration. The tenants' need for a lease-contract and the landlords' need for readily available labour-and not feudal subordination - provide major motivation for tying tenancy with labour contracts. There may still be some element of unequalness in this exchange between contracting parties in the sense that the commitment of labour on the part of the tenant is an additional extraction by the landlord over and above the crop-share he is normally to receive. However, this unequalness is a feature of land market, and therefore not exploitative, a fact further established by the absense of any wage-reductions against tenancy-tied labour.

It may however be noted that the landless tenants in our sample transact with their landlords in three different markets, lease market, credit market and labour market. They obtained lease-contract against pre-committed labour services to their landlords. They also obtained credit-support against the lease-contract acceptable as collateral to the landlord. All these landless tenants are involved in, which may be described as tenancy-credit-labour linkage (TCL). However, interlinkages among the tenants are not sourced entirely from the credit market, since tenancy-related labour linkages (TL) constitute a major feature of the study region.

In some empirical works it was observed that the merchant landlords dictated the tenants to sell their output at terms dictated by the former. But the tenants in our sample did not report having faced such compulsion in selling their output to the landlords. We therefore found no interconnection between lease and product market in our study region.

#### 4.8 Informal Loans and Interlinkages

We have just seen that the role of landlord as a loan-giver to the tenants in the informal credit market is insignificant compared to other sources like neighbours and traders who are often responsible for interlinking of credit-contracts with the labour services and output of the borrowing tenants. Credit-labour linkage (CL) among the tenants is therefore entirely sourced from the neighbour-creditors while the CO/CIO- linkages among them are sourced from the trader-lenders.

##### *Credit-Labour Linkage*

Looking first at the credit-labour linkage we observe that 26.47 percent of the privately indebted tenants in Region-I and 8.33 percent in Region-II receive consumption loans from the neighbours against pre-committed labour services (Table 4.12).

**Table 4.12**  
**Interlinking of Credit and Labour Contracts**

Region	Class of Tenants	No. of HHs Borrowing form Informal Sources	No. of HHs Receiving Loan against Future Com-mitment of Labour Supply	Number of Households Who Worked for Their Lenders		Number Rendering Unpaid or Under-paid Non-farm Services to the Employers against the Loan
				At MWR	Below MWR	
I	Landless	2	-	-	-	-
	Sub-marginal	17	8	8	-	-
	Marginal	8	1	1	-	-
	Small	4	-	-	-	-
	Medium	3	-	-	-	-
	Total	34	9	9	-	-
II	Landless	1	-	-	-	-
	Sub-marginal	14	2	2	-	-
	Marginal	5	-	-	-	-
	Small	2	-	-	-	-
	Medium	2	-	-	-	-
	Total	24	2	2	-	-

*Note: MWR = Market Wage Rate*

**Source : Field Investigation**

It is evident from the table that no landless tenant in our sample is involved in CL-linkage which is sourced from the neighbour-creditors. However, almost 50 percent of the privately indebted sub-marginal tenants in Region-I and 14 percent of such tenants in Region-II reported their involvement in CL-linkages.

The incidence of CL-linkage among the tenants is therefore seen to be higher in Region-I which is relatively better irrigated. In general, the greater the demand for labour relative to supply during the peak season, the higher the tendency for tying on the part of the employer. Demand pressure during the peak agricultural operations may be expected to be even higher in relatively better irrigated Region-I because those sub-marginal and marginal cultivators/tenants who want to participate in the labour market would be busy with their own work during the peak time. Moreover, in Region-I where HYV paddy is cultivated and there are three crop seasons, the profile of demand for labour would be even greater, and will have a corresponding effect on the composition of hired labour. All these factors may influence the employers in Region-I to attach more labourers.

This type of labour attachment is short-term in nature and persists only for a few days. All such linked labourers report having worked for their creditors at prevailing market wage rates at the time of repayment of loan and no one was found to render non-farm services to the employer against the loan advanced. Since there is no wage-cut, the labour-linked tenants do not pay any implicit rate of interest. The character of credit-labour linkage (CL) is therefore identical for both the tenants and pure owners.

Considering labour-linkages among the tenants we therefore observe that such linkages are sourced from landlease market or alternatively from credit market. In this connection it is important to note that none of the tenants involved in TL/TCL - linkage report having tied their labour services with other creditors (e.g. neighbours) by taking consumption loans from them. In other words, the tenants involved in TL/TCL-linkage are different from those involved in CL-linkage. The TL/TCL-linked tenants are only free to sell their labour services when there is no work with their landlords. But they may find it difficult to commit future labour services to other creditors because of uncertainty regarding when the landlord may require them. TL/TCL-linkage therefore indirectly dissuades the tenants from entering into credit-labour linkage with any other sources.

#### ***Credit -Output & Credit-Input-Output Linkage***

In a peasant- subsistence economy the condition of tenants continues to be grim because of their limited resource-base. They lease in land in order to subsist. Subsistence mode of production is therefore the key feature of tenant-cultivation in our study area. However, a section of larger tenants in recent years are seen to lease in additional land in the Rabi and Boro season to enter into the highly profitable cultivation of winter vegetables and boro spring paddy. In a majority of cases these seasonal tenancy contracts are under fixed tenancy where the tenants have to bear all costs of production. The seasonal tenants under such circumstances resort to production loans for the cultivation of winter vegetables and boro paddy which are highly input-intensive in nature. In our study area, such loans are provided by the traders when the tenants are willing to promise to repay the loan through future sale of output at creditor-determined prices. We therefore find two important features of credit-output linkages among the tenants in our study area. Firstly, such linkages are seen to be a by-product of fixed rental tenancy which induces a need for credit-support because in addition to the fixed amount of money rent, the tenant has to bear all costs of production without any contribution from the landlord. Secondly, the CO/CIO-linkages exist only against production of winter vegetable (CO) and boro paddy (CIO), with CIO-linkage being prevalent only in the better irrigated Region-I. The information on CO/CIO-linkages is put in the following table.

**Table 4.13**  
**Interlinking of Credit and Output Contracts**

Region	Household Category	Households Borrowing from Informal Sources	Households Borrowing against Future Commitment of Output	Households Selling their Produce to the Traders	
				At Market Price	Below Market Price
I.	Landless	2	-	-	-
	Sub-marginal	17	-	-	-
	Marginal	8	6(4)	-	6
	Small	4	3(1)	-	3
	Medium	3	1	-	1
	Total	34	10(5)	-	10
II.	Landless	1	-	-	-
	Sub-marginal	14	-	-	-
	Marginal	5	2	-	2
	Small	2	1	-	1
	Medium	2	2	-	2
	Total	24	5	-	5

*Note : Figures in parentheses denote the number of linked borrowers receiving input loans.*

**Source : Field Investigation**

As revealed from Table 4.13, the incidence-pattern of output-linkages among different classes of tenants is similar to that among the pure owners. The incidence of such linkages falls heavily on the marginal tenants and then gradually declines as the status of the tenants rises. Landless and sub-marginal tenants are excluded from such linkages because of their being primarily the labourer class and moreover, non-optimal size of their cultivation-operation discourages them from seeking production loans. Among these output-linked borrowers of marginal and above size-classes, CIO-linkage is confined to the relatively poorer section among them, who are unable to undertake production without input-support from traders. CO-linkages are, however, found to be prevalent among the relatively larger tenants who can bear input costs on their own and hence avoid the additional exploitation posed by CIO-linkages in the form of overvaluation of input prices.

Table 4.13 also shows that 29 percent of tenant cultivators in Region-I and 21 percent in Region-II from among those borrowing from informal sources have borrowed from traders against future commitment of output. 50 percent of the output-linked borrowers in Region-I report having received input loans. In contrast, all the output-linked borrowers in Region-II received cash loans. Out of 15 output-linked tenant-cultivators in Region-I and Region-II, 10 are subject to CO-linkage and only 5 cultivators are involved in CIO-linkage. CO-linkages therefore have a larger incidence than CIO-linkages as was also found for owner cultivators in the previous chapter.

#### 4.9 Types and Extent of Interlinkages

Out of 117 tenant cultivators in our sample, 38(i.e. 32.48 percent) are interlinked households. About 60 percent of the linked households are subject to labour-linkages and the remaining are output-linked. Table 4.14 gives a type-wise break-up of interlinkages among various classes of tenant cultivators.

**Table 4.14**  
**Types of Interlinkages Among Various Classes of Tenant Cultivators**

Class of Tenants	Types of Linkage	Number of Linked Households			Percentage of Individual Type Linkage to Total Linked Households
		Region-I	Region-II	Total	
Landless	TCL	2	1	3	7.89
Sub-marginal	TL	9	-	9	23.69
	CL	8	2	10	26.32
Marginal	CL	1	-	1	2.63
	CO	2	2	4	10.53
	CIO	4	-	4	10.53
Small	CO	2	1	3	7.89
	CIO	1	-	1	2.63
Medium	CO	1	2	3	7.89
<b>Total</b>	-	<b>30</b>	<b>8</b>	<b>38</b>	<b>100.00</b>

It is observed from the Table 4.14 that the incidence of interlinkages among the tenants is much higher in Region-I than in Region-II. It is also observed that CL-linkage is the dominant form of interlinkage, followed sequentially by CO-linkage, TL-linkage, CIO-linkage, and TCL-linkage. The relative importance of different types of interlinkages among the linked tenants are shown in the diagram.

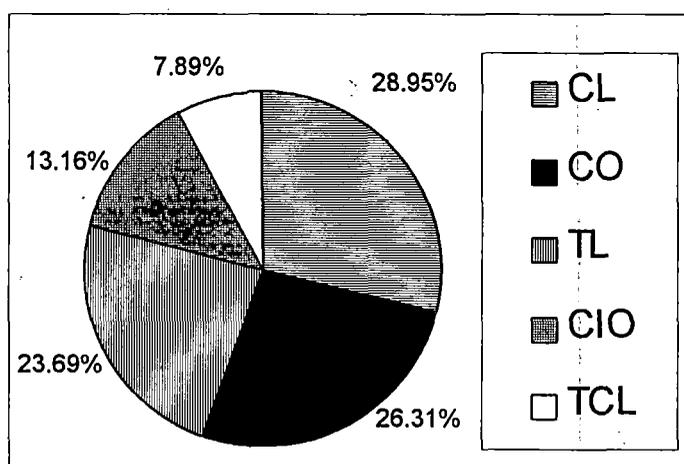


Fig. 4.1: Typology of Interlinkages among Tenant Cultivators

Considering the comparative incidences of labour and output-linkages among the interlinked pure owners and tenants we observe that 60.53 percent of the linked tenants are subject to labour-linkages compared to a figure of 42.42 percent for the pure owners. This implies that the importance of output-linkages is higher among the linked pure-owners than the linked tenants.

The following table shows the extent of interlinked transactions among different classes of tenant households.

**Table 4.15**  
**Extent of Interlinked Transactions Among the Tenants**

Class of Tenants	Number of Tenants	Number of Interlinked Tenants	Percentage of Interlinked Tenants
Landless	3	3	100.00
Sub-marginal	59	19	32.20
Marginal	28	9	23.68
Small	18	4	22.22
Medium	9	3	33.33
Total	117	38	32.48

Source : Field Investigation

Table 4.15 shows that the proportion of linked households is highest among the landless tenants and it gradually falls with an increase in the ownership holding (upto 5.00 acres of land), but then rises for the medium tenants. The landless and sub-marginal tenants in our sample are involved in labour-linkages whereas the tenants belonging to upper land-classes are households who link their output with the credit-condition.

It has been observed that 49.57 percent of the tenants are privately indebted compared to a figure of 52.17 percent for the pure owners. In contrast, about 18 percent of the pure owners are interlocked. The similar percentage for the tenants rises to 32.48 percent. We therefore find that although incidence of informal loans is slightly higher among the pure owners, the incidence of linkages is much lower among them. Since the tenants in our study area are placed at a lower position in the landowning scale, their own capacity to finance consumption or production needs is proportionality reduced. As such, they are more prone to credit-linkages. There is also a component of tenancy - tied labour contract which is not sourced from the credit market. The relative poverty and resulting dependence of the subsistence tenant cultivators on other classes are the primary factors explaining the higher linkages among the tenants. It may however be noted that the higher incidence of interlinkages among the tenants is a reflection of more severe needs of survival on the part of the tenants who are actually on the verge of subsistence and whose enterprising activity is extremely limited by the size of ownership holding.

Nevertheless, inspite of having to bear the additional burden of tenancy cost (as compared to pure owners), the tenant cultivator in the study region is more willing to commit labour, either in his own tenanted lands if he belongs to marginal and higher land-categories, or to the lands of his creditor if he belongs to the sub-marginal or "landless" (i.e. pure tenant) category. For this reason, there is greater readiness to undertake additional production with production loan-support as well as to go in for seasonal tenancy on lands left fallow by other cultivators, particularly for the cultivation of winter vegetables. The primary season for this appears to be qualitative. If we go back and consider the caste-wise/community-wise distribution among tenants *vis-a-vis* pure owners, we see that whereas the latter are SC (i.e. Rajbanshi) dominated, the former has a larger proportion of Muslims and other Hindu upper castes. This section, in the study region, largely comprises post-partition migrants who have settled the area on tenancy arrangements with the landowners. As migrants (both recent and not - so-recent), the competitive motive among this section is high, which accounts both for their willingness to take up tenancy in the first place, and to seek credit in whatever form available to work their tenanted lands.

Out of 38 cases of interlinkages among the tenant cultivators, 12 cases (comprising 3 cases of TCL - linkage and 9 of cases of TL-linkage) were sourced primarily from the land market and the remaining 26 cases represent the major features of credit-linkages among the tenant households. Of these 26 cases of credit-linkages, 57.69 percent are sourced from production loans and the remainder from consumption loans. Production loans are thus seen to be responsible for explaining interlinkages for the majority of the credit-linked tenant cultivators.

#### 4.10 Terms of Borrowing

Mode of repayment of production and consumption loans among the tenants (Table 4.16 & Table 4.17) largely follow the pattern of repayment modes observed among the pure owners in the preceding chapter. Trader-credited production loans are clustered against 'money to crop' and 'input to crop' repayment-modes indicating a strong desire of the trader-lenders to control the output market. All other sources of production loans are seen to advance loans in cash against cash-repayment. None of the indebted tenants in our sample report having received production loans from their own landlords.

**Table 4.16**  
**Modes of Repayment of Production Loan**

Region	Modes/Sources	Landlord	Traders	Neighbours	Friends & relatives	Professional Money-lenders	Total Instances
I	Money to Money	-	-	4	1	4	9
	Money to Crop	-	5	-	-	-	5
	Input to Crop	-	5	-	-	-	5
	Money to Labour	-	-	-	-	-	-
	Total	-	10	4	1	4	19
II	Money to Money	-	-	2	1	4	6
	Money to Crop	-	5	-	-	-	5
	Input to Crop	-	-	-	-	-	-
	Money to Labour	-	-	-	-	-	-
	Total	-	5	2	-	4	11

Source: Field Investigation

**Table 4.17**  
**Modes of Repayment of Consumption Loan**

Region	Modes/Sources	Landlord	Neighbours	Friends & relatives	Professional Money-lenders	Shopkeepers	Total Instances
I	Money to Money	2	6	3	7	6	24
	Crop to Crop	-	1	1	-	-	2
	Crop to Labour	-	3	-	-	-	3
	Money to Labour	-	6	-	-	-	6
	Total	2	16	4	7	6	35
II	Money to Money	1	5	3	4	2	15
	Crop to Crop	-	3	-	-	-	3
	Crop to Labour	-	-	-	-	-	-
	Money to Labour	-	2	-	-	-	2
	Total	1	10	3	4	2	20

Source: Field Investigation

So far as the mode of repayment of consumption loans are concerned, we observe that the neighbour-credited loans are clustered against all the repayment-modes among which 'crop to labour' and

'money to labour' forms of repayment are important from the point of view of interlinkage. Labour-linked loans from the neighbours are also interest-free as we have seen in the case of pure owners in chapter 3. Friends and relatives, as usual, advance interest-free goodwill loans for consumption purposes. The participation of the landlords in the informal credit market as a creditor of consumption loans is again very low since only 3 landless labourers were found to take loans from their landlords.

Terms and conditions of borrowing are also reflected by the interest charged on loan. Using the methodology developed in Section 3.7 for the computation of interest rates, we calculate the rate of interest paid by tenant borrowers on linked and non-linked credit transactions. For linked credit transactions we have calculated separately the implicit and explicit rates of interest to arrive at the total effective rate of interest. A comparison of rates of interest paid by different classes of tenant borrowers on linked and non-linked credit transactions have been made in Table 4.18.

**Table 4.18**  
**Mean Effective Rates of Interest Paid by Tenants on**  
**Linked and Non-Linked Borrowings**

Class of Tenants	No. of Linked Borrowers	No. of Non-linked Borrowers	Mean Rates of Interest Paid by Non-linked Borrowers	Mean Rates of Interest Paid by Linked Borrowers		
				Stipulated Rates of Interest	Implicit Rates of Interest	Total Effective Rates of Interest
Landless	3	-	-	0	0	0
Sub-marginal	10	21	137.58	44.00	0	0
Marginal	9	4	108.32	44.00	86.28	130.28
Small	4	2	82.53	44.00	81.72	125.72
Medium	3	2	47.02	44.00	68.47	112.47

**Source : Field Investigation**

It is observed from the above table that the landless tenants (TCL - linked) do not require to pay any rate of interest on linked-loans. They received linked loans only from their landlords for which no rate of interest was charged. The incidence of non-linked loans among this class of borrowers is however nil. The labour-linked sub-marginal borrowers also do not pay any rate of interest on linked loans. However, the mean rate of interest paid by the non-linked borrowers among them is as high as 137.58 percent. The linked marginal tenants (CO/CIO-linked) pay mean effective rate of interest of 130.28 percent per annum against which the non-linked marginal tenants pay a much lower rate of interest (108.32 percent). Small and medium tenants are also seen to pay much higher mean effective rates on linked - loans compared to non-linked loans. The character of interlinkages among the tenant cultivators is therefore class-specific. The labouring class among the tenants (i.e. landless and sub-marginal tenants) do not pay any rate of interest on linked - borrowings and as such interlocking-arrangement appears to be helpful and beneficial to this class. The tenants belonging to marginal and higher categories however pay much higher effective rate of interest on linked-loans (CO/CIO-linked transactions) compared to non-linked loans thus making interlinkages exploitative to them. The whole analysis therefore indicates that while labour-linkages are not exploitative, output-linkages are. Output-linkages enhance 'surplus extraction' from the village economy and is responsible for relative impoverishment of the tenant cultivators in the study region.

#### 4.11 The Character of Interlinkages Among Tenant Cultivators

Our study area is dominated by sub-marginal and marginal tenants who otherwise have small presence in the lease market. The landlords on the other hand generally come from the medium and large cultivators classes who are relatively richer in the land asset but either unable or unwilling to cultivate it entirely by themselves. The registration of tenants under Operation Barga programme has been very slow and the majority among tenants therefore remain under

non-legalised tenancy. Patterns of crop-sharing and cost-sharing reveal a situation where the tenants, in a vast majority of cases, are deprived of legally stipulated crop-shares. However, the landlords do not show any tendency to exploit the tenants also through the credit market. In contradiction to expectation from a segment of the literature, tenancy-credit linkage which interlocks landlease and credit markets is virtually absent from our study area. The rural credit market of the tenants is not dominated by their own landlords but by other lenders. Tenancy-labour linkage among poorer sections (i.e. landless and sub-marginal tenants) among tenants is however an important feature of the landlease market under which tenants receive lease-contract in exchange of pre-committed labour to their landlords, for which they however report having been paid at prevailing market wage rates.

So far as other sources of loans in the informal credit market are concerned, no major departure exists from the case of owner cultivators and we find three forms of linkages among the tenants in our study region, namely CL, CO, and CIO linkages. Again, the CL-linkage is sourced from the neighbour-creditors, the other two forms are sourced from trader-creditors. CL-linkage among the tenants do not entail any payment of interest. As such, no element of exploitation can be attributed to CL-linkages which are largely confined among sub-marginal tenants. CO/CIO-linkages on the other hand involve usurious rate of interest (both implicit and explicit interest) and hence are exploitative in nature. There is therefore not much variation in nature of credit-interlinkages between tenants and owner cultivators. However, the incidence of credit-interlinkages is higher among the tenants as a whole which appears to be a reflection of more severe survival needs on the part of the tenants most of whom are actually on the verge of subsistence. Considering the spread of this survival needs over different land-classes among tenants we see that dependence on linked credit is deeper even for small and medium tenants, when compared to equivalent classes among pure owners. It would appear that tenants, even in the larger categories, are made more credit-dependent by the fact that they have to make over part of their crop as land-rental payments to the landlords. In such a situation they are much more dependent on production loans, and are forced to accept the usurious CO/CIO - linked credit-terms by traders just in order to survive as cultivators.

### Notes & References

1. The tenants who do not have any land of their own and lease in all the lands they cultivate are called pure tenants or landless tenants.
2. The tenants who have some land of their own are called mixed tenants or owner tenants.
3. cf. Bharadwaj and Das (1975), p.230
4. *Land Reforms in West Bengal : Statistical Report - IV* (Calcutta :1980), West Bengal, Board of Revenue, Statistical Cell, p.1
5. Ghosh, S.K. (1981), p.196
6. Economic Review 1990-91
7. *Bargadars in West Bengal and an Assessment of their position in the Field* (mimeo., August 1985), West Bengal Land Reforms Office
8. Westergaard (1986), p.58,67,86
9. Bandyopadhyaya, Nripen (1983) : *Evaluation of Land Reform Measures in West Bengal : A Report* (Calcutta, Cyclostyled by the Centre for Studies in Social Sciences)
10. Mallick, Ross (1993), pp. 58-60
11. *World Development Report 1990*, pp. 64-65
12. cf. Ref. No. 2, p. 20
13. cf. Ref. No. 3, P. 20
14. Bhaduri (1973), Prasad (1974)

# ECONOMETRIC ANALYSIS OF INTERLINKAGES AMONG LANDLESS LABOURERS

### 5.1 Introduction

The landless agricultural labourers are the most vulnerable and neglected section of rural economy. Their income is low and employment irregular. Since they possess no specialised skill or training they hold no lien on their existing employment. Socially, they therefore form the weaker section of the community, and being unorganised, cannot fight for their rights. Because of all these reasons their economic lot has failed to improve in five decades of post-Independence economic development.

Since access to the organised credit market is dependent mostly on the ownership of land for collateral, landless labour households are by and large excluded from this market. Moreover, the formal credit agencies do not provide consumption loans which is urgently needed by the landless labour households in times of crisis. Due to the lack of alternative source of credit, the landless agricultural labourers very often depend on informal sources on relatively adverse terms and conditions. The landless labour household which do not generally have non-labour assets that can be used as collateral, may opt to link their labour services with the creditor while borrowing from him.

The present chapter deals with the terms and conditions of borrowing of the landless agricultural labour households in the informal credit market with special attention to credit-labour linkages. It also examines the extent of exploitation if any, in linked borrowing as contrasted to non-linked borrowing.

The analytical methodology to be pursued evaluates loan-based exploitation/concession in terms of (effective) interest rates and mark-up or mark-downs on this. Over three econometric exercises, qualitative variables are gradually introduced in order to make a disaggregated analysis of credit-labour linkage possible.

### 5.2 Channels of Creditor-Control

The private money-lenders exercise various kinds of controls over the landless agricultural labourers of the less developed countries. The existing theoretical models provide three channels of control, the rate of interest, the size of loan and the period of repayment.

Some authors (Bhaduri, 1977; Prasad, 1974) have tried to explain the factors underlying the exceptionally high interest rates in a poor agrarian economy. A poor landless borrower in the informal credit market generally has no access to the formal credit market because the collateral he offers is unacceptable in the formal credit market. This in turn, gives certain 'monopoly power' to the rural money-lenders to whom his collateral is acceptable. Since there is a highly personalised relation between the lender and the borrower in a rural economy, the lender can easily secure the collateral from the borrower in the event of a default. It is assumed in these models that only the defaulted principal is recovered from the borrower through the transfer of collateral. Gongopadhyay and Sengupta (1989)

criticised the model by arguing that with so much of monopoly power over the borrower, the lender could recover not only the defaulted principal but also defaulted interest.

However, rate of interest is taken as the only control variable in these models. But according to Borooah (1980), the size of loan is an additional control variable to the lender in conjunction with the rate of interest charged on the loan. For example, the lender may reduce the rate of interest to encourage the borrower to take larger loans and default.

Besides the rate of interest and the size of loan, Sarap (1991) assumed another instrument of control, such as, period of repayment. Without changing the rate of interest, the lender may stipulate a short repayment period in the loan contract. This type of loan contract may be accepted by the borrower if the demand for loan is extremely inelastic<sup>1</sup> and when there is no alternative source of borrowing. In this case, the borrower loses the whole of his collateral if he fails to repay the loan within the short period.

Apart from the above-mentioned direct means of control, the lender may also exercise an indirect way of control in the traditionally backward rural setting. The lender may establish control over the borrowers' labour services. In other words, the lender can guarantee the recovery of loan by interlinking credit contracts with the labour services of the borrowers. The borrowers who do not have non-labour assets which can be used as suitable collateral, may be in a position to renegotiate loan by future promise of labour service. The necessity to pledge this non-marketable collateral to lenders provides the lender the opportunity to offer loan to the borrowers combining transactions in two markets simultaneously. Thus, credit market tend to interlink with labour market.

The phenomenon of bonding of labour service to the sources of credit has attracted a great deal of social and political debate. It assumes special significance when the valuation put on this 'tied' labour is less than the market price of labour during the period of repayment.

According to Chattopadhyay and Bhattacharyya, "The essential features of the interlinkage approach, however, are associated with the appropriation of surplus not only in the form of ground-rent and usury"<sup>2</sup>, but also through extraction of "unpaid labour services of the labourers by the landlords through providing loans."<sup>3</sup> The existence of such 'surplus appropriation' is, however, an empirical question, to which we now turn.

We have used data for a sample of 40 landless labour households selected randomly from 12 villages. We have interviewed both the landless agricultural labourers and the money-lenders in the sample villages with whom the landless labour households had credit transactions.

### 5.3 Sample Characteristics

Cooch Behar did not previously have a class of landless agricultural labourers as in other districts of West Bengal. Each cultivating family had at least some land for itself. With the influx of a large number of Bangladeshi migrants, a small class of landless agricultural labourer has grown.<sup>4</sup> Influx of Bengali migrants displaced from the neighbouring state of Assam has also swelled the number of landless agricultural labourer in Cooch Behar in recent years.<sup>5</sup>

A distribution of the landless labour households by caste and community reveals that a majority of them are muslim.

**Table 5.1**  
**Caste and Community-wise Distribution of Landless Agricultural Labourers**

Region	Community By Caste/Religion	Number of Households	Percentage
I	Mohammedan	16	66.67
	Scheduled Caste (H)	7	29.17
	Other (H) Caste	1	4.16
Total	-	24	100.00
II	Mohammedan	7	43.75
	Scheduled Caste	4	25.00
	Other (H) Caste	5	31.25
Total	-	16	100.00

**Source : Field Investigation**

Table 5.1 shows that two-third of the labourers in Region-I belong to muslim-sub-population. Scheduled Castes (H) however constitute less than one-third of the labourers, while the percentage for 'other Hindu castes' is negligible. The dominance of muslim labourers is also observable in Region-II. However, the importance of Scheduled Caste (H) among the labourers is slightly lower in Region-II than that of other (H) caste. The overall sample is therefore dominated in number by muslim, followed by Scheduled Casts(H), followed by other Hindu castes. The landless labourers thus form the weakest section of the village community.

Distribution of the labourers according to the level of education also indicates their poverty and backwardness. The following Table 5.2 shows that majority of the landless labourers in our study region are illiterate.

**Table 5.2**  
**Distribution of Landless Agricultural Labourers**  
**According to Levels of Education**

Region	Level of Education	Number of Households	Percentage
I	(a) Illiterate	23	95.83
	(b) up to primary	1	4.17
Total	-	24	100.00
II	(a) Illiterate	14	87.50
	(b) up to primary	2	12.50
Total	-	16	100.00

**Source : Field Investigation**

The above table shows that around 96 percent of labourers in Region-I and 87 percent in Region-II are illiterate. For the two sample regions as a whole, 37 labourers are illiterate which constitute 92.5 percent of the total sample. The extent of absolute illiteracy is therefore highest among the landless labourers compared to other sections of farm households. One labourer in Region-I and two in Region-II reported having studied up to primary level.

The community and educational profile of the labour households seems to indicate that they enjoy inferior social status compared to the landowning households. In fact, they occupy the weakest socio-economic position *vis-a-vis* the landowning households in a rural set-up.

### 5.3.1 Typology of Agricultural Labourers

One of the important factors accounting for heterogeneity among agricultural labourers is the time duration of their labour-contract. Accordingly, we can distinguish between casual, semi-attached and attached labourers as defined below .

A labourer making a contract with a particular employer only for one day at a daily wage rate is called *casual labourer*. He is paid, normally, at the end of day's work. His contract for one day with one employer does not affect his next day's contract with other employer. At the other extreme, we have *attached labourers* (or Farm Servants) whose duration of work is usually one year. During that stipulated period he is exclusively attached to his employer. We have also found labour contracts which are intermediate between the two extreme cases of daily contracts with casual labourers and annual contracts with attached labourers. Casual labourers sometimes get involved in contracts or informal agreements with employers for a particular piece of work (e.g. planting or harvesting of paddy) or a given duration. The labourers continue to work with the same employer till the agreed piece of work is over. The labourers are free to work with any other employer for the rest of the time. This type of temporary labour attachment may be regarded as extension of the daily contract with casual labourers. In the present study, we have described them *semi-attached labourers*. The difference in this intermediate contract from day-to-day casual or annual attached labour contract is not simply one of duration, but more significantly, is in terms of freedom to work for more than one employer in a given agricultural year. Another difference was also found in respect of nature of work done. While the casual and semi-attached labourers have reported to have performed only farm-work, attached labourers performed farm as well as non-farm activities of the employer.

### 5.3.2 Rural Credit and Landless Agricultural Labourers

In our sample, 31 landless agricultural labourers of the total (i.e. 77.5 percent) had obtained credit from informal credit sources, of which 26(i.e. 83.87%) had borrowed from large cultivators and 5 (i.e. 16.13 percent) from village shopkeepers. The lenders reside in the sample villages and have a face-to-face relationship with the borrowers. Only 6 labour households (i.e. 15 percent of the total ) obtained institutional credit (DRDA loan) during the reference year. Despite the launching of various anti-poverty schemes such as IRDP, RLEGP, NREP, JRY, etc. for the welfare of the rural poor, the involvement of landless labourers in the informal credit market remains very high for the reasons already mentioned in Section 5.1 and that too is a reflection of their perpetual poverty and backwardness.

We found the following types of contractual arrangements between the borrowers and the lenders in the informal credit market to be prevalent in our survey area :

**Contractual Loan Arrangement Commonly Prevalent in  
Cooch Behar District**

Sources of Borrowing	Contractual Arrangement	Typology of Labourers
Borrowing from Larger Cultivators	Linked	(i) Semi-attached Labourers (ii) Attached Labourers
	Non-linked	Casual Labourers
Borrowing from Village Shopkeepers	Non-linked	Casual Labourers

The terms and conditions of borrowing from these two sources are now discussed in turn.

#### 5.4 Borrowing from Larger Cultivators

The larger cultivators (cultivating more than 5.00 acres of land) are an important source of credit to the landless agricultural labourers in our study area. They are not professional money-lenders. They often advance loans to the labourers with a view to interlinking their labour services. In some cases, however, the cultivators are reported to have given unconditional loans to the labourers where the loan-contracts are not linked to the labour services of the borrowers. The role of the cultivators as a lender of credit to the landless agricultural labourers in the informal credit market may now be discussed below .

##### 5.4.1 The Case of Semi-attached Labourers

We have noted earlier that semi-attached labourers are basically casual labourers who have entered into a temporary attachment with the employer on a number of successive days for a particular piece of work. An important feature of this type of labour attachment is the link between the consumption credit and tying up of labour services with the employer-creditors. The labourers take consumption loans in cash or kind (paddy) from the prospective employers on promising to do a particular piece of work at a future date. These contracts occur for such operations as ploughing, transplantation, harvesting, etc. The labourers continue to work for the same employer on a number of successive days till the agreed piece of work is over. The larger cultivators generally enter into such contracts with more than one casual labourers to complete the entire agricultural operation within a very short period. In our sample 18 landless labourers have obtained credit in advance from their prospective employers against future commitment of labour supply. The period of attachment with a particular employer does not exceed 13 days in succession at a time.

A number of factors may be pointed out which can influence the lender to go in for this type of labour-tying arrangement. Firstly, in order to finish the major agricultural operations within a short-time the larger cultivators put high premium on the quick and ready availability of labour. Secondly, the employer-creditor may also employ them at lower than market wage rate and thus reduce their own expenditure/ recruitment cost. The employer has a special incentive to lend money to the tied labourers, not only because recovery is easier but also because it cement the labour-tying arrangements. From the labourer's point of view, tying of labour services may be necessitated by the consumption and medical expenditure needs in the slack season. It also provides assured employment for a length of time, however short it may be. This natural mutual advantage leads to its formalisation into seasonal contracts. The information on credit-labour linkage relating to the semi-attached labourers is given in the following table .

**Table 5.3**  
**Linking of Credit and Labour Contracts : Semi-attached Labourers**

Region	Number of Labourers	Number Receiving Credit Against Future Commitment of labour supply	Number Rendering Labour Services		Number Providing Non-farm Services
			At MWR	Below MWR	
I	24	13(54.17)	8	5	-
II	16	5(31.35)	2	3	-
Total	40	18(45.00)	10	8	-

*Note : Figures in parentheses are percentages of row totals.*

*MWR = Market Wage Rate*

**Sources : Field Investigation**

It is observed from Table 5.3 that 13 labourers in Region-I and 5 labourers in Region-II obtained credit against future commitment of labour supply. The contracts stipulate that labourers must work on a number of successive days until a particular agricultural operation is over. It therefore appears that 54.17 percent of the landless labourers in Region-I and 31.35 percent in Region-II worked as semi-attached labourers for different agricultural operations with their employers in the reference year. Out of 13 semi-attached labourers in Region-I, 8 labourers have reported that they had received market wages at the time of work. Similarly, out of 5 semi-attached labourers in Region-II, 2 had received prevailing market wage. None among these 10 labourers did pay any interest (i.e. either implicit or explicit). But 5 labourers in Region-I and another 3 in Region-II reported having been paid wages below the market rates. In these cases, the payment of interest (implicit) takes the form of wage-cut. It should be noted that no other explicit (or stipulated) rate of interest was charged by the employer-creditors from any of the borrowing semi-attached labourers. We may further note that no semi-attached labourer has reported to have rendered any paid, underpaid or non-paid non-farm services for their employers.

One may, therefore, find the existence of consumption loan when the relationship between the employer and the labourer takes the form of a contract leading to semi-attachment of the labourers. But consumption loan alone cannot explain such relationship between the employer and the labourers. Another factor is also present which works herein. There grows a long-standing social relationship between the employers and the labourers, as they live in the same village. Such a labourer takes consumption loan from a particular employer, he repays the loan in terms of labour service, takes the loan once again and repays and so on. This type of conventional loan transaction between the employer and the labourer is a common feature of a poor agrarian economy of our study area. The social relation between the employers and the labourers appears to be the basis of loan transaction between the two parties. To such an employer, this type of labourer is like a old and trusted servant, he is available in time, but is not a paid farm servant for the whole year. Under this circumstances, the labourers also have no propensity to move to another employer and work under him. For this reason, they work in the farm of their employer-creditors on priority basis. In the natural course of events, the labourers receive consumption loans as well as sympathetic consideration in times of distress and assured employment for a period of time from their employer-creditors.

We have seen in Table 5.3 that in most of the cases (10 out of 18 cases) the semi-attached labourers were paid according to the prevailing market wage rate and they did not pay any rate of interest. This interest-free lending is not a revelation in any form of generosity on the part of the larger cultivator - he lends money under this arrangement practically for securing his own future advantage. During the peak season the pressure of agricultural work-load becomes heavy. Consequently, larger

cultivators would have to face scarcity and uncertainty of agricultural labourers. In order to overcome this uncertainty, the employer advances consumption loan to a few agricultural labourers with a view to tying their labour services. A labourer also stretches his hand out for such loans. The only condition imposed under this system is that the loan-receiving labourers are liable to work in the farm of their employers as and when called for. This system costs less than engaging a farm servant in service on annual contract. A farm servant (attached labourer) would generally have to be employed on a fixed wage for a year. Moreover, he would get food and cloths from his employer. The expenditure on a farm servant may not be productive if he is not provided with sufficient work throughout the year. In this context, the attachment of agricultural labourers for particular piece-work (e.g. ploughing, transplantation, harvesting, etc.) through the provision of interest-free consumption loan is therefore beneficial to the employer. The average amount borrowed per labourer is only Rs. 64.83. These loans are short-term in nature. They were advanced 2 to 4 months before the actual work is done. Our survey results revealed that all such labourers managed to repay the loans during the course of a single agricultural season. These loan-based relations, did not in any way, lead to any debt-bondage of the labourers.

The landless labourers are generally very poor. They cannot provide any tangible collateral to secure loans, but loans are urgently needed by them in times of crisis. On this pretext, any attempt to charge explicit rate of interest by the cultivators would severely affect the economic condition of the borrowing labourers. However, the lender - cultivators are not observed to charge any explicit (or stipulated) rate of interest from the poor labourers. This seems to indicate that the extraction of 'surplus labour' through usurious rate of interest is not the objective of the cultivators of our sample area comprising mainly the local SC and local muslim. However, in certain cases of linked loans, an element of interest (implicit) arises in the form of wage-cut. However, this type of 'indirect' interest earning is the by-product in a labour-surplus poor agrarian economy. All the linked labourers facing wage-cut are migrant labourers who are relatively new settlers in the area. In our example, 10 semi-attached labourers who were paid at the prevailing market wage rate and hence did not pay any (implicit) rate of interest, 80 percent among them were 'local' of which 87.5 percent are local SC and the remaining 12.5 percent are local muslim. It therefore appears that the lender- cultivators generally prefer to offer interest-free linked loans to the local labourers who belong within the social system of the same village. Any entry of the migrant labourers into this kind of 'benevolent' interlocking arrangement is almost completely restricted. Out of 18 semi-attached labourers in our sample 10 are migrant labourers, of which 8 are paying (implicit) rate of interest and 2 labourers manage to get interest-free linked loans from the lender-cultivators. The nature of interlocking labour-arrangement therefore depends to a high degree on the existing social relations between the cultivator and the labourer in a peasant economy.

As observed in Table 5.3, 54.17 percent of the labourers in Region-I and 31.35 percent in Region-II have tied up their labour services with their employers for certain agricultural operations. Labour-linked credit transaction therefore seems to be higher in Region-I than in Region -II. Demand pressure during the peak agricultural operations may be expected to be higher in the relatively better irrigated Region-I, because those sub-marginal and marginal farmers who want to participate in the labour market would be busy with their own work during peak times. Similarly, in Region-I where HYV paddy (boro, a spring paddy) is cultivated, the profile of demand for labour is even higher, and will have a corresponding effect on the composition of hired labour. All these factors may influence the employers in Region-I to attach more labourers and to get work done on a contractual basis. It may be pointed out that all these contracts are oral in nature.

By using consumption efficiency hypothesis, M.R. Gupta (1987) has shown in his theoretical model that employers provide consumption loan to the labourers in the lean season for their own interest. Gupta argues that by supplying credit in the lean season the employers indirectly help to raise the labourers' efficiency level in the peak season. In our field work, however, we have observed that the purpose behind such loans are generally immediate i.e. most part of the loan is usually spent on medical treatment, or debt repayment and cannot therefore be tagged to future labour-efficiency.

The labour-tying arrangement is often cemented by (i) allotment of land for cultivation, (ii) allotment of homestead for residence and (iii) old or hereditary loans. But we have not come across any semi-attached labourer who has been provided with an allotment of land for cultivation or residence. No such labourer has reported old or hereditary loans as the basis of relationship with his employer. Semi-attached labourers are therefore largely free from influence of the employer-creditors. They are basically casual labourers who are employed on implicit contracts for a given piece of job or a given duration. They continue to work with the same employer till the agreed piece of work is over. The amount of loan taken is not very large and it is repaid within the contract period.

It may be noted that a borrowing casual labourer may enter into such implicit labour contract with the employer more than once during a given agricultural year. Depending on the number of times of attachment of a labourer during the reference year, we have classified the semi-attached labourers into three groups : Group A, B and C. In group A we include those labourers who were attached to their employers once in the reference year. Group-B includes those labourers who were attached twice by their employers. Finally, the labourers having their attachment thrice with their employers are included in group-C. The following Table 5.4 gives the total length of assured employment enjoyed by different categories of semi-attached labourers in the reference year.

**Table 5.4**  
**Total Length of Assured Employment by Different Categories of**  
**Semi-attached Labourers (1990-91)**

Region	Group	Number of Labourers in the Group	Number of Days of Assured Employment	Number of Days of Assured Employment per Labourer
I	A	4	37	9.25
	B	7	151	21.57
	C	2	73	36.5
Total	-	13	261	20.08
II	A	3	32	10.67
	B	2	36	18.00
	C	-	-	-
Total	-	5	68	13.6

**Source : Field Investigation**

Table 5.4 shows that group A, B and C in Region-I include 4,7 and 2 labourers respectively. The 13 semi-attached labourers in Region-I enjoyed 261 days of assured employment as a whole in the reference year. The number of days of assured employment per labourer is found to be 20.08 days in Region-I. Similarly, in Region-II, 3 labourers belong to group A and 2 labourers in Group-B. No

labourer belonging to group-C was found in Region-II. The total number of days of assured employment enjoyed by 5 semi-attached labourers in Region-II were 68 days in the reference year. The number of days of assured employment per labourer is therefore 13.60 days in Region-II. It seems to us that the number of days of assured employment per labourer is slightly higher in Region-I which is agriculturally more busier than Region-II. It therefore appears that the linked labourers not only get consumption loans in times of need, they also get assured employment for a length of time, however short it may be.

In the large-scale field survey conducted by Bardhan and Rudra (1978), 68 percent of the casual labourers in the sample villages of West Bengal had taken consumption loans from their employers against future commitment of labour. The results obtained from our field-investigation also lend support to this kind of labour-tying arrangement through the provision of consumption loans. This type of implicit contracts with labourers for future commitment of labour leads to gradual development of "futures market" in agricultural labour<sup>6</sup>.

We have made an enquiry into the economic status of the semi-attached labourers in our sample. The results are presented in the following tables.

**Table 5.5**  
Economic Status of Semi-attached Labourers

Semi-attached Labourers		Number	Percentage
1.	Who never had any land	7	38.89
2.	Who were tenants before but were evicted	1	5.56
3.	Who were farm servants before	1	5.56
4.	With other members of family working as casual labourers	6	33.33
5.	With other members of family working as farm servants	—	—
Total Number of Labourers		18	100.00

Note : Figures not additive .

Source : Field Investigation

**Table 5.6**  
Lean Season Occupation of Semi-attached Labourers

Occupation		Number	Percentage
1.	Sundry work outside the village	8	44.44
2.	Sundry work inside the village	11	61.11
3.	No Occupation	3	16.67
Total Number of Labourers		18	100

Note : Figures not additive .

Source : Field Investigation

Some important features about the economic status of the semi-attached labourers are emerging from the above tables (Table 5.5 & Table 5.6). Firstly, 38.89 percent of such labourers never had any land. This implies that more than 60 percent of such labourers had lost land in the past due to repayment of old debt or any other reasons. Secondly, 33.33 percent of such labourers had one or more members in their families working as casual labourers. This implies a lower worker-dependent ratio for the labourers in general. Thirdly, during the lean seasons in the year when the labourers do not have many employment possibilities in agriculture, they have reported to have done all kind of odd jobs inside or outside the village (Table 5.6). 61.11 percent of such labourers have done sundry works inside the village. They engaged themselves in earth-work, cutting grass etc. during lean season. 44.44 percent of the labourers reported having worked outside the village as *kamla* (daily labourer) during the lean seasons.

#### 5.4.2 The Case of Attached Labourers (Farm Servants)

Only the large cultivators (cultivating more than 7.50 acres of land) in the survey areas were found to keep farm servants to help in their agricultural work. The duration of contract of the attached labourers is usually one year. The actual period of work sometimes exceeds one year, the contract being renewed every year. The attached labourers are employed on a fixed wage which is paid partly at the end of the year and partly in some installments spread over the year. In addition to that, they receive meals every day and cloths once or twice in a year. In Cooch Behar, the attached labourers are locally known as *Batsara - Kamla*. The attached labourers are required to do all kinds of work both on the farm and outside the farm and the quantity of work is also not subjected to any limits. The number of days which the servant may take off as holidays is also negligible. There is no limit as to the number of hours of work that he may have to do during the course of the year.

Out of 40 landless agricultural labourers in our sample, 4 labourers have reported to have worked as attached labourers. In 3 out of these 4 cases, the duration of contract was one year. Only one labourer has reported having worked for his employer for 3 successive years. All the 4 attached labourers were local labourers of which 3 belonged to SC-community and one belonged to muslim community. They maintained a long-standing social relation with their employers.

The credit relation of the attached labourers with their employers may now be discussed.

(a) *Initial Loans* : Sarap (1991) in his study on rural Orissa has found that the attached labourers (farm servants) were given some loan in money or paddy in the initial period of employment. This was meant to help the newly employed labourer either to settle his past debt with the previous employer or to meet some immediate expenditure (like food). This interest-free initial loan helped in cementing the relationship between labourer and landlord. But we did not find a single case where the farm servant has been given loan at the initial period of employment. Unlike the semi-attached labourers, the attached labourers did not receive any loan from their employers in advance against future commitment of labour supply. Therefore, credit relation alone does not appear to be the basis of long-term labour attachment in our study area. Personal relationship between the employer and the labourer may go a long way in explaining the labour tying relations.

(b) *Subsequent Loans* : Although the attached labourers in our sample do not take any advance or initial loan from their employers, they take subsequent loans frequently to meet social and medical needs. All the 4 attached labourers had taken loans from their employers subsequent to joining the employer as attached labourers. The amount of loan varied from Rs. 40 to Rs. 87. The loan (which did not carry any rate of interest) borrowed by attached labourers from their employers was deducted from their annual payment at the end of contract period.

The dependence of a farm servant on his employer further increases when his family becomes dependent on the employer. Living in the homestead provided by the employer and / or cultivating land allotted by the employer is another way of dependence of the farm servant.

Table 5.7 shows that no attached labourers received allotment of land for cultivation from his employer. One labourer (who remained attached to his employer for 3 years) has been provided with the allotment of homestead land for residence. Three attached labourers reported that their family members worked occasionally as casual labourers for their employers. The degree of dependence of the attached

labourers is therefore seen to be higher than that of the casual or semi attached labourers in our sample who do not have any additional aspect of dependence on the employer - creditors except for the credit-support offered by the employers.

**Table 5.7**  
**Aspects of Dependence of**  
**Farm Servants on Employers**

Farm Servants	Number
1. Attached to the same employer for more than one year	1
2. Receiving allotment of land for cultivation	0
3. Receiving allotment of land for residence	1
4. With other members of the family working as casual labourers	3
Total Number of Farm Servants	4

*Note : Figures not additive.*  
**Source : Field Investigation**

**Table 5.8**  
**Annual Remuneration of the**  
**Farm Servants**

Farm Servants	Annual Remuneration	Daily Wage
FS <sub>1</sub>	Rs. 2872	Rs. 7.87
FS <sub>2</sub>	Rs. 3158	Rs. 8.65
FS <sub>3</sub>	Rs. 3762	Rs. 10.31
FS <sub>4</sub>	Rs. 2465	Rs. 6.75

$$* \text{ Daily Wage} = \frac{\text{Annual Remuneration}}{365}$$

**Source : Field Investigation**

It is noteworthy that unlike the service of casual labourers the service of farm servants does not have a fixed price in the labour market. There are no standard wage rates for the farm servants. A great deal of variation is noticed among the wages paid to different farm servants in our sample. In each individual case there is a wage-basket consisting of some cash, some grains, some meals and snacks and some other payments in kind such as cloths, etc. We have undertaken imputation of all the kind payments to arrive at the annual remuneration of the farm servants (denoted respectively by FS<sub>1</sub>, FS<sub>2</sub>, FS<sub>3</sub>, and FS<sub>4</sub>) in Table 5.8 which reveals that the annual remuneration of the farm servants varies widely from case to case. The wage differences may reflect the difference in such factors as the age and capacity for work of the servant, quantity of work to be done and economic status of the employer, etc.

We have also calculated the daily wages for the farm servants (Table 5.8) by dividing the annual payments to the farm servants by the total number of working days, 365, in a year. While the daily wages earned by the casual labourers were found to vary between Rs. 18 and Rs. 22 in the reference year, the daily wages obtained by the farm servants were much lower in the range of Rs. 6.75 to Rs.10.31 only. It seems that the farm servants do pay a price for the security they enjoy in terms of lower wage rate per unit of time of work than a casual labourer. Of course, the annual income of farm servant is higher than that of casual labourer as the latter works only a fraction of the number of days in a year. Average annual income of the casual labourers in our sample is estimated at Rs. 2347 which is lower than the annual remuneration of all the farm servants.

#### 5.4.3 Non-linked Credit to Casual Labourers

Four casual labourers in our sample received non-linked loans from larger cultivators. Such loans are not tied in the sense that the borrowers are not required to repay the loan through their own labour services. The credit is highly personalised in nature i.e. the relation between the lender and the borrower

is highly personalised one. The loan is sanctioned against no securities and no interest is charged on the amount of loans advanced. Of course, the loan amount is not very high. The average amount of loan is Rs. 50 only. The credit is a short-term one - the average turn over period being roughly 4 months. In case of non-linked loans, the lenders are confident of the recovery of loans from the labour-borrowers. In an immobile rural community, where the news of wilful default by a borrower reaches most of the potential lenders quickly<sup>7</sup>, dishonouring a contract by a borrower means a loss of status which economists hardly emphasise. They are, however, extremely important in a village community. Even the poorest do not want to lose face by wilful default of a contract. As such, the labourers try to retain confidence of the lender by repaying the loan in time. We found that all the borrowers getting non-linked loans were 'local' labourers.

### 5.5 Borrowing from Village Shopkeepers

Although the cultivators are the most important and dominant source of credit to the landless agricultural labourers, in some cases however they report having received loan from village shopkeepers. The loan-giving business of such shopkeepers involves small amounts. The rate of interest charged is seen to be very high - it varies between 15-20 percent per month. The loan often takes the form of sale of goods (grocery items) on credit. Five casual labourers in our sample received kind loans from village shopkeepers. In such cases of lending, the lender do not demand any collateral-asset but insists on a guarantor who would provide accurate information about the creditworthiness of current and potential borrowers and thus guarantee repayment of the loan. In such cases, there will be involvement of a third party in the credit contract between the lender and the borrower. The potential employers of the casual labourers generally perform the role of the third party. Such types of loan arrangements may help the lender to screen the potentially creditworthy borrower from the others. As a result, he would be able to ascertain borrowers of doubtful ability to repay. Once he is sure of genuine borrowers, he may provide them credit (in kind) without insisting on a collateral or linking other cash or /services of the borrower with the credit contract. Of the five labourers receiving loan from shopkeepers, four are migrant and one is local labourer.

### 5.6 Graphical Analysis

A source-wise break-up of credit in the informal credit market would reveal that 83.87 percent of the indebted landless labourers in our sample had received loans from larger cultivators and the remaining 16.13 percent from village shopkeepers (Fig. 5.1). Cultivators are therefore the dominant source of credit to the landless agricultural labourers in our sample.

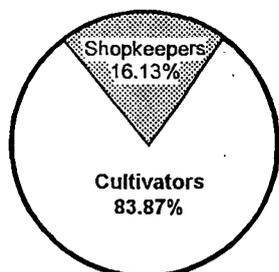


Figure 5.1:  
Sources of Informal Loan

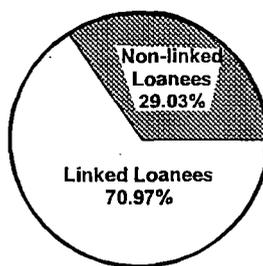


Figure 5.2 :  
Types of Loans

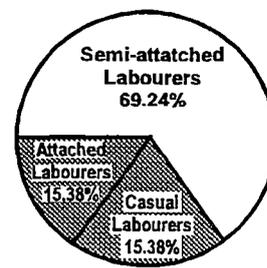


Figure 5.3 :  
Typology of Labourers Borrowing from Cultivators

We may further note that about 71 percent of the borrowing labourers had linked and only 29 percent had non-linked credit transactions in the informal credit market (Fig. 5.2). The incidence of linked transactions is therefore highest among the landless labourers compared to the pure owners and tenant

cultivators. A type-wise break-up of labourers borrowing from larger cultivators reveals that more than two-third are semi-attached labourers, the remaining share is equally divided between attached labourers and non linked casual labourers (Fig. 5.3).

The dominance of semi-attached labourers within the labour-linkage arrangements indicate that cultivator - creditors in the sample region give precedence to medium-term labour needs, having neither the capacity nor the work-load that would justify long-term attachment of labourer. Thus, the dominant factor in determining cultivator-demand for labour is seasonal in nature.

### 5.7 An Evolution of the Characteristics

The incidence of labour-tying observed in our study area should not be interpreted as representing stereo-type landlord-self relationship typical of feudal agrarian relations. An essential feature of feudalism recognised by different scholars is the extra-economic coercion that it involves. "A typical expression of such coercion would lie in the landlord possessing the legal power to compel him to work for him *gratis* or to serve him in many other ways, curtailing his individual liberty."<sup>9</sup> But we did not find a relation between the employer and the labourer which is extra-economic in nature. The belief that the attachment of labourers with a particular employer for a period of time robs the labourers of their freedom in the labour market and this constitutes an indicator of the continued prevalence of pre-capitalist relations - does not seem to be very much convincing. The fact that a labourer is under contract - whether formal or informal - does not tell us whether he is free or unfree. A free labourer is one who enters into a contract to work for a stipulated period of time for a certain employer but does not surrender his freedom. He can leave unconditionally at the end of the specified period. "Economic stringency may indeed compel a free labourer to agree temporarily to terms he does not consider favourable. But his basic right to refuse work or to seek alternative employment remains uncompromised."<sup>10</sup> The tied labourers (semi-attached and attached) in our sample are not unfree labourers as because they can leave the job unconditionally at the end of the contract period. The attachment of the labourers to their employers arises purely from economic consideration and not from non-economic coercive forces which are distinguishing features of feudalistic relation.

Labour-tying arrangement is often cemented by the provision of consumption loan. But the debtor-creditor relationship between a labourer and his employer "imposes no greater or no different curtailment of freedom than in other walks of life. Thus a farm servant who has taken a loan from his employer may not be free to leave that employer. But the same kind of restriction operates on any employee of a government enterprise or a capitalist farm who has taken a loan from, say, his provident fund account."<sup>11</sup> We do not, however, treat such a credit relation (between the employer and the employee) an example of 'feudal bondage'.

The relationship between the employer and the labourer is one of economic exchange between them. The period of contract is extremely specified. We found no outstanding debt relation which curtailed the individual liberty of the labourer over an indefinite period of time. During the course of field investigation it appears to us that credit relations are quite common in a poor peasant-oriented agrarian economy but it does not lead to 'debt-bondage' of the labourers. None of the labourers in our sample report such 'bondage' during our survey-work.

There is a tendency to treat annual contract of a farm servant an indicative of pre-capitalist attachment while the daily contract of the casual labourer as a more free and more capitalistic labour market. This appears to us to be extraordinarily fallacious. The duration of contract alone can not make any difference between capitalist and pre-capitalist relations between them.<sup>12</sup>

The preference for a long-term or permanent contract to a temporary one appears to be perfectly normal and rational behaviour in the sphere of the world outside agriculture. "From the point of view of the employee, the long-term contract assures a security, preference for which is accepted by all as perfectly reasonable. From the point of view of the employer it is an advantage to work with a person known for a long time and one who had had the opportunity of learning a job which is denied to the casual temporary employee. There is no reason why these considerations should not apply well to the employment of labourers by farmers."<sup>13</sup>

It is sometimes argued that the capitalistic development of Punjab agriculture and the success of Green Revolution in the state was made possible by extracting 'surplus labour' of the bonded migrant labourers from Bihar, dominated largely by the feudal power of Punjab landlords. The bonding of migrant labourers in Punjab reminds us the story of intolerable miseries suffered by the bonded labourers. The labourers are reported to have been locked with the cattle in the cattleshed and were physically assaulted by the employer to make them submit to the inhuman conditions.<sup>14</sup> But the type and mechanism of labour-tying represented in our sample reveals a completely different picture. The formerly princely state of Cooch Behar, now a district in West Bengal, is largely a peasant economy where the element of mutual help and cooperation often shapes the contractual relations among the lender-cultivators and the indebted labourers. Neither the large-scale capitalist farming of the Punjab-type nor the feudal (or semi-feudal) agrarian structure prevailing in Bihar would represent the agricultural scenerio of the district. Rather it is the natural outcome of the mutual interdependence and cohesiveness of a peasant economy. The cultivator's need for a readily available labour in the peak season and the labourers demand for cheap consumption loan - are both satisfied with this type of labour-tying arrangement. The employers do not use any extra-economic coercion and/or binding to curtail the free movement of the labourers.

Considering these divergences in sample characteristics from those alluded to in the literature, a deeper investigation of contractual arrangements and their consequences and characteristics in the sample region is necessitated.

#### **5.8 A Micro -Study of Intra-Sample Variations in Interest Rates**

In this section we want to examine intra-sample variations in interest rates and try to indentify the factors which are responsible for such variations. Out of a total of 40 landless labourers in our sample, 31 are indebted labourers. We therefore take these 31 indebted labourers for the study of rate of interest. We expect from the evidence of other studies that the rate of interest will be lower for borrowers with higher loan size and higher economic status (reflected by per capita income). Moreover, there are some qualitative factors (like caste, religion and origination/residentary status of the labourers) which may have a bearing on intra-sample credit relationships. Other things remaining the same, a local labourer can get loan on favourable terms as compared to a migrant labourer who is a relatively new settler in the area. A determinate model of rate of interest may thus include both the qualitative and quantitative variables. Keeping this in mind, we have collected information from all the 31 indebted labourers regarding the size of loan, per capita income, condition of loan (whether linked), caste, religion and origination / residentary status. All these informations are presented in the Table 5.9 below.

**Table 5.9**  
**The Sample Data Set**

Sl. No.	Annualised Interest Rates	Loan Size	Nature of Credit Contract	Caste	Per Capita Income	Residentary Status	Loan Source
1.	0	45	Linked	SC	Rs. 570	Local	Cultivator
2.	0	30	Linked	SC	Rs. 533	Local	Cultivator
3.	0	78	Linked	SC	Rs. 610	Local	Cultivator
4.	0	90	Linked	SC	Rs. 621	Local	Cultivator
5.	0	50	Linked	SC	Rs. 593	Local	Cultivator
6.	0	65	Linked	SC	Rs. 661	Local	Cultivator
7.	0	125	Linked	SC	Rs. 617	Local	Cultivator
8.	0	40	Linked	Mahammedan	Rs. 623	Local	Cultivator
9.	0	70	Linked	Mahammedan	Rs. 640	Migrant	Cultivator
10.	0	85	Linked	Mahammedan	Rs. 632	Migrant	Cultivator
11.	122	70	Linked	Mahammedan	Rs. 593	Migrant	Cultivator
12.	137	85	Linked	Mahammedan	Rs. 576	Migrant	Cultivator
13.	113	110	Linked	Mahammedan	Rs. 613	Migrant	Cultivator
14.	98	60	Linked	Other(H) Caste	Rs. 652	Migrant	Cultivator
15.	127	75	Linked	Other(H) Caste	Rs. 634	Migrant	Cultivator
16.	118	50	Linked	Other(H) Caste	Rs. 563	Migrant	Cultivator
17.	124	140	Linked	Other(H) Caste	Rs. 674	Migrant	Cultivator
18.	108	90	Linked	Other(H) Caste	Rs. 618	Migrant	Cultivator
19.	0	50	Linked	SC	Rs. 569	Local	Cultivator
20.	0	61	Linked	SC	Rs. 604	Local	Cultivator
21.	0	87	Linked	SC	Rs. 597	Local	Cultivator
22.	0	40	Linked	Mahammedan	Rs. 682	Local	Cultivator
23.	0	35	Non-linked	Mahammedan	Rs. 652	Migrant	Cultivator
24.	0	50	Non-linked	Mahammedan	Rs. 673	Migrant	Cultivator
25.	0	75	Non-linked	Mahammedan	Rs. 704	Local	Cultivator
26.	0	60	Non-linked	Mahammedan	Rs. 752	Local	Cultivator
27.	180	125	Non-linked	Other(H) Caste	Rs. 607	Migrant	Shopkeeper
28.	120	150	Non-linked	SC	Rs. 621	Local	Shopkeeper
29.	150	75	Non-linked	Mahammedan	Rs. 528	Migrant	Shopkeeper
30.	144	100	Non-linked	Mahammedan	Rs. 573	Migrant	Shopkeeper
31.	140	175	Non-linked	Mahammedan	Rs. 511	Migrant	Shopkeeper

*A First Approach :*

Initially we confine our analysis to quantitative variables. In Table 5.9 there are 3 quantitative variables, namely, rate of interest, loan size and per capita income. We express the functional relationship among the three quantitative variables in the following form :

$$r = f(\text{LS}, \text{PCI})$$

Where  $r$  = Rate of interest,  $\text{LS}$  = Loan size and  $\text{PCI}$  = Per capita income

On the evidence of other studies<sup>15</sup> we are led to expect a lower interest rate on a large-sized loan. Since the large-sized loans are associated with proportionately less transaction costs, the creditors lower interest rates on large-sized loans to accommodate lower transaction costs. The  $\text{PCI}$ , on the other hand, represents the economic status of the loan-receiptant which provides a certain degree of bargaining power in the negotiation of credit-contract. A decrease in interest rate is therefore expected with an increase in  $\text{PCI}$ .

We fit a linear regression model of the following form :

$$r = \alpha + \beta_1 (\text{LS}) + \beta_2 (\text{PCI}) + u_i$$

The co-efficients are then estimated by the method of Ordinary Least Squares (OLS). The estimating equation will be of the following form :

$$r = \hat{\alpha} + \hat{\beta}_1 (\text{LS}) + \hat{\beta}_2 (\text{PCI}) + e_i$$

The regression results are estimated on three pre-sorting of data on Table 5.9 to give us the grouped results of Table 5.10. Of this the first pre-sorting is made of the nature of loan-contract to capture intrinsic differences in rate of interest and relative importance of loan size and per capita income between linked and non-linked loan samples. The second pre-sorting is made of the residential origin variable (i.e. origination of the borrower) to capture intrinsic differences in the functional variables and their relative importance between local and migrant sub-samples. The third sorting is made of the loan-source variable to capture the same variational patterns in accordance with the segments of the sample drawing loans from cultivators, or alternatively from shopkeepers. For each pre-sorting, two regressions are therefore estimated i.e. linked : non-linked; local: migrant; cultivator-source :shopkeeper - source.

**Table 5.10**  
**OLS Applied for Qualitative Variables**  
**Regression Results**

Loanee Categories	$\hat{\alpha}$	$\hat{\beta}_1$	$\hat{\beta}_2$	df	n	Std. Err. of Est.	R <sup>2</sup>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>A. By nature of loan-contract :</b>							
i) Linked	86.38	0.83 (1.73*)	-1.7 (0.47)	19	22	57.32	0.137
ii) Non-linked	397.91	0.61 (1.49**)	-0.60 (2.5**)	6	9	44.29	0.77
<b>B. By nature of origination :</b>							
i) Local	-6.04	0.64 (3.2*)	-0.05 (0.42)	12	15	24.57	0.46
ii) Migrant	393.88	0.62 (1.68**)	-0.54 (0.28)	13	16	48.23	0.46
<b>C. By nature of loan-sources:</b>							
i) Cultivator	129.50	0.87 (2.23*)	-0.25 (1.14)	23	26	52.40	0.20
ii) Shopkeeper	157.71	-0.18 (0.49)	0.02 (0.07)	2	5	29.01	0.11

Note : Figures in parentheses denote computed t-value.

\* Significant at 5% level.

\*\* Significant at 10% level.

The value of  $\hat{\alpha}$  (i.e. the intercept of estimating equation) represents threshold rate of interest or entry-level rate of interest. It indicates the average rate of interest payable by any loan-receiver on the point of entry into the credit-arrangement. The value of  $\hat{\beta}_1$  measures the incremental interest payable due to unit changes in loan size and hence may be termed as incremental-interest-coefficient due to loan size. Similarly,  $\hat{\beta}_2$  measures the incremental-interest payment due to unit changes in per capita income and may be termed as incremental interest-coefficient due to per capita income.

It is observed from Table 5.10(col. 1) that the local borrowers pay the lowest threshold rate of interest while non-linked loanees pay the highest threshold rate. The former segment is therefore best placed while the latter segment is worst placed as regards threshold interest and credit-terms.

Col.2 of Table 5.10 reveals that in one single case of loanees borrowing from shopkeepers the  $\hat{\beta}_1$ -coefficient (i.e. incremental-interest-coefficient due to LS) possesses the expected negative sign. For all other loanee-categories, the  $\hat{\beta}_1$ -coefficients are positive and they negate the expectation formed on the basis of other studies that creditors lower interest rates on larger sized loans and encourage default. Commercial money-making through lending is not the objective of the cultivators. Unlike the shopkeepers, the cultivator - creditors do not lower the interest rate to encourage indebtedness and therefore transaction cost does not play any role in determining a lower rate of interest for higher sized loans for them. The positive values of  $\hat{\beta}_1$  instead represent interest *mark-ups* on account of larger sized loans.

Col. 3 of Table 5.10 shows the values of  $\hat{\beta}_2$ -coefficient (i.e. incremental-interest-coefficient due to PCI) for different categories of loanees. Except for a single case of loanees borrowing from shopkeepers, the coefficients in all the cases possess the expected negative signs indicating a reduction in rate of interest with the increase in per capita income. The negative values of  $\hat{\beta}_2$ -coefficient represent interest *mark-downs* on account of better economic status of loan-receipients (i.e bargaining power of the loanee).

As is evident from the table (col.3), the incremental-interest-coefficients due to PCI (i.e.  $\hat{\beta}_2$ ) are very low reflecting the weak bargaining position of the loan-receipients in general. However, the coefficient is highest (in absolute terms) for the linked loanees who enjoy much more bargaining power *vis-a-vis* other categories of loan-receipients.

A cross-comparison of regression results would reveal some variational patterns across various loanee-categories. The threshold interest rate paid by the linked loanees is much lower than the same paid by the non-linked loanees. Interlinked credit-labour contracts are therefore less exploitative compared to the non-linked loan contracts in the informal credit market represented by our sample.

The incremental-interest-coefficient due to loan size (i.e.  $\hat{\beta}_1$ ) is higher for the linked loanees compared to the non-linked loanees. Placed in a comparatively worse position as regards threshold interest, the non-linked loanees get some relaxations in terms of lower mark-ups. On the contrary, there is no incentive for the linked loanees to take larger sized loans as because the rate of interest rises more sharply for them for a given increase in loan size. Although interlinked credit-labour contracts are less exploitative than the non-linked credit contracts, the incremental exploitation with every increase in loan size would be higher for linked loanees compared to non-linked loanees.

The numerical value of incremental-interest-coefficient due to PCI (i.e.  $\hat{\beta}_2$ ) is much higher for the linked loanees compared to the non-linked loanees. This implies that the linked loanees enjoy much more bargaining power because of their ability of determine labour supply in the peak season. Interest

mark -down for the linked loanees will therefore be relatively greater.

The  $R^2$  - value is very low (0.137) for the linked loanees which implies that the loan size and per capita income together are not adequate in explaining the variation in rate of interest effectively for this category. Therefore, other qualitative factors (such as caste, religion and migrant status of the loanees) need to be incorporated into the analysis. For non-linked loanees, on the other hand, the  $R^2$  -value is fairly high (0.77) which implies that the loan size and per capita income together can explain the larger extent of variation in the rates of interest. The relative importance of the qualitative factors is therefore less in case of non-linked loanees.

Coming to the case of loanee-category by nature of origination we observe that the threshold interest rate is negative for the local borrowers. This is unexpected and remarkable since the implication of negative threshold rate being that even if there is possibility of loan default, this is condoned upto a point by the creditor. The creditor thus has a more-or-less philanthropic attitude towards loanees who are longtime local residents. In Table 5.9 it is noticed that all the local borrowers (except one receiving loan from shopkeeper) pay zero rate of interest. The transaction cost of the loan is entirely borne by the creditor with no effort to recover even this from the borrowers thus accounting for the negativity of threshold rate. The migrant labourers however pay much higher threshold rate which provides an entry-barrier for them to such loans. The mark-up factors (i.e.  $\hat{\beta}_1$ ) are almost same for both local and migrant labourers but both of these are lower than the corresponding mark-up for the linked labourers. This implies that both the local and migrant labourers are placed at relatively lower mark-up scale and therefore enjoy some relaxations compared to the linked loanees who already get some benefits in terms of lower entry-level rate of interest. Mark-down factor (i.e.  $\hat{\beta}_2$ , which represents the bargaining power) for migrant labourers is higher compared to the local labourer. Apparently, this result is unexpected. But the implication of this result is that the creditor gives some incentives to the migrant labourers (in the form of higher mark-down to remain within the village and maintain attachment with the creditor at least for a short period of time. The  $R^2$ -values although low are the same for both categories. Since this pertains to the pre-sorting on the basis of origination of the loanees, they indicate that local/migrant status has equal importance for both local and migrant loanees. Further, since the pre-sorting on the single qualitative variable of origination accounts for as much as 46 percent of variability in interest rates, the overwhelming importance of this variable is indicated.

Lastly, we consider the loanee-category by nature of loan-sources. It is observed in Table 5.10 that the loanees borrowing from shopkeepers pay much higher threshold interest rate compared to those borrowing from cultivators. Cultivators are therefore the cheapest source of loan to the landless agricultural labourers in our sample. It is noteworthy that while the interest charged by the cultivators is implicit interest which arises purely from wage-cut, the interest charged by the shopkeeper is explicit or stipulated interest.

The incremental-interest-coefficient due to loan size (i.e.  $\hat{\beta}_1$ ) is positive for borrowers taking loan from cultivators while the coefficient is negative for those receiving loan from shopkeepers. This indicates the difference in motivation of the two sources towards lending. The cultivators increase the rate of interest with the increase in loan size and discourage large-sized loans. Commercial money-making through lending is not the objective of the cultivators. They advance loans primarily to link the labour services of the loanees. In certain cases, however, they charge (implicit) rate of interest. But the objective is to reduce wage -cost, rather than earning usurious income. In contrast, the shopkeepers are

guided solely by the motive of earning usury income. They reduce the rate of interest with the increase in loan size and encourage indebtedness. The possibility of default is nil because of the presence of a guarantor.

We may further note another interesting feature of lending of the two sources. Since the labourers borrowing from cultivators can determine the supply of labour in the peak agriculture season, they enjoy some degree of bargaining power indicated by the negative value of incremental-interest-coefficient due to PCI (i.e.  $\hat{\beta}_2$ ). But such a bargaining power to reduce the rate of interest is completely absent when the labourers receive loans from shopkeepers as indicated by the positive value of  $\hat{\beta}_2$  in their case.

The  $R^2$ -values (0.20 and 0.11 respectively) for this loanee-category are very low indicating the relative unimportance of loan source in interest determination *vis-a-vis* other qualitative variables.

Reviewing the regression results represented in Table 5.10 we find that marked distinctions exist between loanees in the category of linked local borrower who have borrowed from cultivators *vis-a-vis* non-linked migrant borrowers who have borrowed from shopkeepers. The former segment is best placed while the latter segment is worst placed as regards threshold interest and credit-terms. Loan size is a primary determinant of interest mark-up, an observation further strengthened by the fact that most of the t-coefficients for  $\hat{\beta}_1$  are significant at some level or the other. This further establishes the absence of pecuniary or usurious character of the credit arrangement in the peasant-based economy of the sample region. Except for the single case of loanees borrowing from shopkeepers, these results all negate the expectation formed on the basis of other studies that creditors lower interest rates on larger sized loans to accommodate lower transaction costs and to increase indebtedness or serial debt. With regard to PCI variable, the relative economic status of the loan-receipt provides a certain bargaining position in the negotiation of the credit contract which is represented by the interest mark-down on this account. However, bargaining power is generally low except for the linked loanees who enjoy much more bargaining weight because of their ability to determine labour supply.

### 5.9 Analysis of Qualitative Factors : ACOV Dummy Regression Model

We have just seen that the rate of interest depends not only on the loan size and per capita income but also on qualitative factors. We have specified five qualitative factors in our model such as nature of credit contract, caste, religion, origination/ residential status of the borrower and source of loan. Our model therefore consists of seven explanatory variables, of which two are qualitative and remaining five are quantitative variables. Applying the ACOV - dummy regression model, the modified regression equation may be presented in the following form :

$$r = a + a_1 D_1 + a_{21} D_{21} + a_{22} D_{22} + a_3 D_3 + a_4 D_4 + a_5 X_5 + a_6 X_6 + u_i$$

Where dependent variable  $r$  is the rate of interest paid and independent variables and dummies are as follows :

Nature of credit contract	$D_1$	= 1, if credit contract is linked = 0, otherwise
Caste	$D_{21}$	= 1, if the household belongs to SC = 0, otherwise

Religion	$D_{22} = 1$ , if the household belongs to muslim community = 0, otherwise
Residentiary Status	$D_3 = 1$ , if the household is local = 0, otherwise
Loan Source	$D_4 = 1$ , if the labourer takes loan from cultivator = 0, otherwise
	$x_5 =$ size of loan
	$x_6 =$ per capita income

The results of the dummy regression analysis are presented in the table below :

**Table 5.11**  
**Results of ACOV Regression**

<i>Dependent Variable : Rate of Interest paid (percent per annum)</i>		
Explanatory Variables	Coefficients	t-value
Nature of Credit Contract	-22.214 (23.649)	-0.94
Caste	-87.359 (29.362)	-2.98*
Religion	-52.895 (17.389)	-3.04*
Origination/ Residentiary Status	-23.612 (22.801)	1.04
Loan Source	-81.016 (35.641)	-2.27**
Loan Size <sup>e</sup>	0.366 (0.220)	1.67***
Per capita Income	-0.231 (0.184)	-1.26
Intercept	286.34	-
Std. Err. of r Est.	30.35	-
R <sup>2</sup>	0.8391	-
No. of Observations	31	-
Degrees of Freedom	23	-
Estimating Equation : $r = 286.34 - 22.21D_1 - 87.36D_{21} - 52.90D_{22} - 23.61D_3 - 81.01D_4 + 0.37X_5 - 0.23X_6 + U_1$		

Note : Figures in brackets are standard error of the coefficients.

\* Significant at 1% level

\*\* Significant at 2.5 % level

\*\*\* Significant at 10 % level

It is observed from Table 5.11 that R<sup>2</sup>-value substantially improves to 0.8391 on inclusion of qualitative factors. Most of the coefficients are also statistically significant. Non-significance of coefficients

for nature of credit contract, nature of origination are more the results of variability by the other quantitative factors, than unimportance of these results themselves.

The intercept term (i.e. 286.34) represents the threshold or entry-level interest rate. It is the average rate of interest paid in the case where all included qualitative factors (dummies) are inoperative i.e. the rate of interest paid by the non-linked non-SC non-muslim migrant borrower who have borrowed from non-cultivators (i.e. shopkeepers) at the point of entry into the credit arrangement. This category of loanees is considered as the 'base category' in the ACOV dummy regression model (where all dummies=0) which do not get any interest mark-down concession anywhere.

The coefficients of all explanatory variables are negative except that of the loan size. Each of these negative coefficients represents mark-downs on the rate of interest corresponding to the associated variables. The mark-down factor is highest for the caste -variable at -87.359. It needs to be noted that the caste-dummy of SC and religion-dummy of muslim are mutually exclusive, hence the loanee's membership of either category qualifies him for some concessions. Thus although the mark-down for the SC category is highest, the third in order after this is the mark-down for muslim at - 52.895. Thus caste / religion have the highest combined mark-down impact upon threshold interest rate.

Another point of interest arises from comparison of interest mark-ups on account of loan size between OLS and ACOV regression (Table 5.10 & Table 5.11 ). Compared to a coefficient range (-0.18 to 0.87) in the former, the coefficient in the latter is substantially lower at 0.366. If we remember that the negative coefficient value of -0.18 (i.e. interest mark-down instead of interest mark-up existed) for only those loanees availing shopkeeper-sourced loans, and thus may be dropped from the comparison as belonging to the category of non-linked loans. In such a case, the comparison shows substantial fall in interest mark-up as a result of inclusion of qualitative factors. More specifically, any loanee belonging to either of the qualitative concessional categories is favoured by a reduction of the disincentive to borrow (i.e. mark-up) and consequently can resort to larger sized loans. This would have the interesting implication that where the borrower is SC or muslim or local resident or borrows from cultivator, the tendency to go in for linked loan-transaction multiplies.

Among the explanatory variables the lowest mark-down coefficient is found for the PCI-variable, which is found to have remained largely unaffected by the inclusion of qualitative factors in the ACOV-regression. This is markedly different from the behaviour of the loan size variable in the ACOV regression and shows that overall loan-need and relative bargaining power are determined by economic status rather than any qualitative factor.

#### **5.10 Scaling and Relative Importance of Qualitative Factors**

By fitting the coefficients obtained into the interest rate estimating equation in dummy regression from we obtain the effective interest rate charged per qualitative category among the loanees. The results of coefficient substitution along with computed effective interest rate and magnitudes of sorted interest mark-downs applicable are summarised in the following table.

**Table 5.12**  
**Interest Mark-downs and Scaled Qualitative Variables**

Linked	Local	SC	Muslim	Cultivator	Effective Rates of Interest (percent per annum)	Interest Mark -downs
(1)	(2)	(3)	(4)	(5)	(6)	(7)
(-)	(-)	(-)	(-)	(-)	(286.48)	(-)
(+)	(-)	(-)	(-)	(-)	(264.27)	(-22.21)
(-)	(+)	(-)	(+)	(-)	(233.72)	(-52.76)
-	-	-	+	-	233.58	-52.90
(+)	(-)	(-)	(+)	(-)	(211.35)	(-75.13)
-	-	-	-	+	205.47	-81.01
(-)	(-)	(+)	(-)	(-)	(198.75)	(-87.73)
(+)	(+)	(-)	(+)	(-)	(187.76)	(-98.72)
+	-	-	-	+	183.26	-103.22
(+)	(-)	(+)	(-)	(-)	(176.91)	(-109.57)
-	+	+	-	-	175.65	-110.83
(+)	(-)	(-)	(-)	(+)	(159.63)	(-126.85)
(+)	(+)	(+)	(-)	(-)	(153.30)	(-133.18)
-	+	-	+	+	152.71	-133.77
-	-	-	+	+	152.57	-133.91
+	-	-	+	+	128.96	-157.52
(-)	(-)	(+)	(-)	(+)	(117.74)	(-168.74)
+	+	-	+	+	106.75	-179.73
-	+	+	-	+	94.64	-191.84
(+)	(-)	(+)	(-)	(+)	(94.50)	(-191.98)
+	+	+	-	+	72.43	-214.05

Note : (1) Here ' + ' sign represents the 'dummy-on' situation and ' - ' sign represents 'dummy-off' situation.

(2) Figures within brackets pertain to qualitative categories absent in the sample.

Table 5.12 (col. 6) represents the effective rates of interest paid by various qualitative categories of loanees. The mean effective rate of interest is estimated at 170.97 percent. The effective rates which are higher than the mean value are grouped as relatively higher rates while the effective rates which are lower than the mean value are grouped as relatively lower rates. Accordingly, the relatively higher group includes interest rates in the range of 286.48 - 175.65 percent and the relatively lower group in the range of 159.63-72.43 percent. Corresponding to the first group we get the relatively lower mark-downs in the range of (-22.21 to -110.83) and the second group corresponds to the relatively higher mark-downs in the range of (-126.85 to -214.05).

As regards local loanees (Table 5.12, col.2), we find two distinct clusterings. The first clustering pertain to the mid-range effective interest rates of 175.65- 152.71 (interest mark-down rate : -110.83 to -133.77). The second clustering of local loanees pertain to the lower effective interest range of 106.75 - 72.43(-179.73 to -214.05) . On the whole, the local loanees in col.2 generally pay effective interest rate in the lowest range.

Looking now at community factors (Table 5.12, cols. 3 & 4) the less denser clustering overall is observed for SC loanes in the range of 117.74 - 72.43 (-168.74 to -214.05), followed by muslim loanees with denser clustering in the range of 152.71 - 106.75 (-133.77 to -179.73). In general, therefore, lowest interest rates and highest mark-downs are exhibitant by the SC-category.

Analysing the joint operation of qualitative factors it is obvious that highest mark-downs in interest rate over the entire sample occur for local resident linked SC loanees borrowing from cultivators. The benefit of lower interest extends even to non-linked SCs. After the local SC loanees, the next community in order of mark-downs in interest comprises local linked muslim loanees borrowing from cultivators, followed by migrant muslims in the same category. Loanees belonging neither to SC or muslim categories pay higher effective interest rates receiving lower mark-downs. It may be noted that this category entirely comprises migrants from outside the sample regions.

The scaling analysis of qualitative factors thus establishes that the primary determinant of lower effective interest rates is whether the loan source is loan from another cultivator or from shopkeeper. This in fact strengthens the conclusion of the previous sections, namely that cultivator-creditors do not have a usurious motive in their lending operations. Noting that cultivator-sourced loans offer greater interest mark-down to linked labour this would imply that the cultivator-creditor functions more out of the need to reserve farm-labour services to meet anticipated peak season labour demand.

The next in qualitative importance are community factors. These are namely of two types - either religious homogeneity of the sub-community (muslim) or caste homogeneity (SC). It must be noted that the greater amount of intra-community concessions in terms of interest mark-downs are offered to SC loanees, followed by muslim loanees, followed by non-SC non-muslim loanees who are generally migrants.

The SC-composition of the sample requires further comment. Although classed among the Scheduled Castes, the SC-component of the sample belongs to Rajbanshi community which predominates in Cooch Behar and most of North Bengal. Since their community is homogeneously constituted both in cultural and ethnic terms, it has a unified character and moreover constitutes the indigeneous population. As such the 'indogeneity' factor is the primary determinant of interest mark-down. The next in order of importance is also the qualitative factor of religious-cum-ethnocultural homogeneity which is found among muslim population. Overall the qualifying criterion for more beneficial loan-terms in the peasant economy character of the sample region therefore appears to be the existence/absence of some perceived homogeneity factor. Favourable credit-terms including linked labour services are extended by cultivators to members of their closed communities. Entry is barred to new entrants. As a result, the highest level of concessions are extended within the indigeneous SC-community, followed by the muslim community because of internal cohesiveness. Migrant loanees are relatively disadvantaged because they share no such affinity either among themselves or with the resident population.

Nevertheless the hierarchy of terms is maintained between linked and non-linked loans, without having any markedly high usurious character are preferentially extended by cultivators to members to their own communities, and offer more beneficial concessions relative to non-linked loanees, even though community factor still holds greater importance.

#### 5.11 Conclusion from the Econometric Study

There is a high degree of credit-dependence among the landless agricultural labourers. They are seen to obtain loan from larger cultivators or alternatively from shopkeepers. The creditors are differentiated in terms of their motivation towards lending. The cultivators increase the rate of interest with the increase in loan size and thus discourage larger-sized loans. Commercial money-making through lending is not the objective of the cultivators. They advance loans primarily to link the labour services of the loanees.

In certain cases, however, they charge implicit interest in the form of wage-cut. The objective here is to reduce wage-cost, rather than earning usurious income. In contrast, the shopkeepers are guided solely by the motive of earning usury income. They reduce the rate of interest with the increase in loan size and encourage indebtedness.

Besides the quantitative factors, certain qualitative factors like caste, religion, origination of the loanee, nature of credit contract, etc. play a very important role in the determination of rate of interest in the informal credit market. The highest interest-concession over the entire sample occur for local resident linked SC loanees borrowing from cultivators. The benefit of lower interest extends even to non-linked SCs. After the local SC loanees, the next community in order of interest-concession comprises local linked muslim loanees borrowing from cultivators, followed by migrant muslims in the same category. Loanees belonging neither to SC or muslim categories pay higher effective interest rates receiving lowest interest-concession. It may however be noted that this category entirely comprises migrants from outside the sample regions.

### **Notes & References**

1. Loans for urgent consumption purposes (e.g. medical needs) are extremely inelastic in the sense that the borrowers can not reduce the loan-demand with increasing adversity in loan-terms.
2. Chattopadhyay and Bhattacharyya (1984), p.38
3. *Ibid.*
4. Majumder, D.D. (1977), p. 153
5. Singha, Bidhan, *Uttarbanga Sambad*, 5th May, 1997
6. Bardhan (1980), p. 94
7. Binswanger and Rosenzweig (1986), referred in Sarap (1991), p.147
8. Rao(1980), referred in Sarap (1991), p.147
9. Sen, Bhowani(1962), quoted in Rudra (1982), p. 415
10. Thorner (1962), quoted in Rudra (1982), p. 420
11. Rudra (1982), p. 423
12. *Ibid.* pp. 423-24
13. *Ibid.* p. 424
14. Singh, Manjit (1977), pp. 518-519
15. *cf.* Borooah (1980)

## CHAPTER 6

### SUMMARY, FINDINGS AND SUGGESTIONS FOR RURAL CREDIT REFORMS

#### 6.1 The Issues in the Study

The recent literature in development economics has emphasised the importance of institutions and the impediments that they impose on the development process. The Marxists have a well-known endogenous theory of institutions. The central driving force behind institutions, according to the Marxists, are the forces of production. Changes in productive forces, particularly technological change, produce over time some tension between the existing structure of property rights and the productive potential of the economy, and this tension is resolved in history with the emergence of new institutions. According to the Neo-classical school, led by Coase (1960), institutions are evolved to minimise transaction costs. Imperfect information theory, as an alternative, tries to analyse institutions as substitutes for missing markets in an environment of pervasive risk, incomplete markets, information asymmetry and moral hazard which are characteristic features of developing economies.

Enduring relationships in all economies tend to be somewhat personalised, and this is particularly so in the insecure world of peasant market systems. Among anthropologists Mintz (1959) has been most explicit on this point observing that behind the operation of supply and demand a network of person-to-person dealings persists over time which outlasts any single transaction, for which there are important parallels even in highly industrialised societies. However, in the internal marketing systems of peasant societies, these small distinctions based on personal relationships are more prominent. Under a set of informational constraints and missing markets, interlocking of different agrarian markets can provide an institutional arrangement which may serve a real economic function in a closed peasant economy with face-to-face interactions. For example, a linking of credit and labour contracts may reduce transaction costs and ensure the double coincidence of wants of the borrower-labourer and creditor-employer without which imperfectly monetised economies tend to be inefficient. Interlinked transactions may also provide a way of partially circumventing incomplete or non-existent markets (particularly of credit and insurance). For a poor cultivator without access to an organised credit market, it is possible to hypothecate the standing crop for raising credit from trader-creditor.

Marxists often cite some of these production relations as institutional obstacles to development in a poor agrarian economy, overlooking the microeconomic rationale of the existence of these institutions. Marxian analysis also has a tendency to mechanically equate some of the pre-existing production relations with feudal or semi-feudal mode of production, ignoring how in the real world the same institution adapts itself to the development of the forces of production.

There are two contrasting views in the literature concerning interlinked rural markets. According to one view, interlocking increases the exploitative powers of the stronger elements in the village through interpenetration of markets and in this way increases the quantum of surplus extraction. The other view, while rejecting the thesis that interlinking is necessarily exploitative, explains the benefits of interlinked transactions which contribute to their rationale.

### 6.1.1 Background Characteristics

In the light of this controversy and its underlying issues, an investigation was made into the agrarian economy of Cooch Behar district. For that purpose a sample study was conducted over a stratified random sample of owner cultivators, tenants and landless agricultural labourers drawn from two noncontiguous regions of Cooch Behar district.

Agriculture is the primary occupation in the backward 'no industry' district of Cooch Behar in North Bengal. Because of this high dependence of the regional economy and the population on agriculture and the high intensity of cultivation, the agrarian features of the district are characterised by peasant economy, since both average size of operational holding as well as proportion of landless agricultural labourers are small.

Cooch Behar district has a moderate humid climate in a moderate temperature range with relatively heavy rainfall concentrated between April-September. There are three crop-seasons in the district, namely, *pre-kharif* (March-June), *Kharif* (June-September) and *Rabi* (October-January). The main *pre-kharif* crops of the district are Aus paddy and jute in the *pre-kharif* season. Aman paddy is grown during *kharif* season and tobacco, old seeds, pulses and wheat during the *Rabi* season. *Boro* paddy (February-May) is a new introduction in the cropping matrix of the district. The district is also the major tobacco growing area in the state. Unfortunately, for want of market proximity the extension of area under this crop is not possible. During recent years the district has made remarkable progress in the cultivation of winter vegetables.

The backwardness of the district is also revealed by the poor infrastructural facilities in the area. Transport and communication systems are inadequate, medical facilities are very poor, educational facilities are not sufficiently advanced. Consumption of electricity for productive purposes is also very low. The lack of infrastructural facilities is responsible for the retardation of industrial growth in the area. In the absence of any medium or large-scale industry, the district has been earmarked as 'no industry' district. The scope of employment outside agriculture is, therefore, very limited.

We, therefore, observe that the economy of the district of Cooch Behar is backward on all fronts, an observation further strengthened by the fact that the HDI for the district of Cooch Behar is the lowest among all the districts in West Bengal.

As there is no possibility of immediate industrialisation in near future, the transformation of the backward economy of the district calls for a large-scale development in agriculture. Recent literature on rural development focuses a lot of attention on various types of interlinked transactions existing between land, labour, credit and output markets in the rural areas of less developed countries. Our study therefore examined the interconnections among different agrarian markets in the sample region in the context of the small farmer-oriented poor agrarian economy of the district of Cooch Behar, keeping in mind key issues emerging from the theoretical literature on the subject.

### 6.1.2 Analytical Hypothesis

As outlined in Chapter I, the core system for analytical evaluation of agrarian interlinkages in the sample region is the production - productive class matrix within the agrarian economy of Cooch Behar district. As earlier noted, the distribution of productive classes as exist conform to the canonical formulation

of a peasant economy. However, since the agrarian economy of the district is not oriented entirely to subsistence production, a marginal surplus exists in the form of marketable output and resultant cash-income. These are rendered more prominent by the existence of cash crops like tobacco and vegetables in the district's agricultural cropping - pattern.

As such, interlinkages within the peasant economy of the district have to be evaluated on the basis of whether they are targeted to the extraction of this surplus or not. This central investigative hypothesis needs to be elaborated.

In a poor agrarian economy, analysis of issues is compounded by the presence of marginal and sub-marginal cultivator classes with little or no marketable surplus to offer, and a small proportion of landless labourers for whom marketable surplus in the sense of an extractable output or cash-income surplus is non-existent. The peasant economy of Cooch Behar shows both these classes.

The class of marginal or sub-marginal owner cultivators or tenants basically produces for subsistence. Extraction of any part of their subsistence output or income through implicit or explicit means depresses their subsistence levels. Thus although the concept of 'marketable' surplus is not relevant here, the concept of 'marketed' surplus is. However, any 'surplus' that is marketed is at the expense of subsistence standards. This would imply that high rates of extraction associated with the interlinkages faced by the marginal / sub-marginal cultivator class impose drastic curtailment of their living-standards and are therefore poverty-inducing. The yardstick for assessment of whether such an exploitative character exists or not is the relative level of explicit and implicit i.e. effective rates of interest extraction against interlinked transactions made by the class.

In similar assessment of extractive character of interlinked transaction involving the relatively better -off cultivators, who produce a marketable surplus, the same yardstick of effective interest rates applies, even though it may not have impact on subsistence levels of the class. Rather the impact of high effective rates raises relative poverty in a poor peasant economy, both immediately, and also in the long-term by reducing access to technological transformation of traditional cultivation modes.

The exploitative character of labour-linked transactions involving the landless labourers can also be evaluated with the same yardstick of effective rate of interest. The landless labourers, being the poorest of the poor in a village community, maintain a miserable life at the subsistence level and any attempt to impose a relatively higher effective rates of interest would depress their subsistence standards and therefore increase absolute levels of poverty in the short-run, although in the long-run this might lead to out-migration of labourers to any other villages.

It should be noted that exploitative character of linked transactions made by any class is measured in the relative sense - relative to the mean effective rate of interest paid by this class on non-linked transactions. If the mean effective rate of interest paid by a particular class on linked transactions is lower than the mean effective rate of interest paid by the same class on non-linked transactions, the interlinked transactions are said to be non-exploitative in relative terms, otherwise it would be regarded as exploitative.

We should also keep in mind that any relationship which arises from economic consideration as opposed to extra-economic coercion should not be interpreted as semi-feudal agrarian relations in a peasant economy. Unequal contracts and economic exploitation are quite common in a market relationship but this does not necessarily imply semi-feudal agrarian relations as long as extra-economic coercion is absent from the picture.

## 6.2 Observations of the Study

### 6.2.1 The Rural Credit Market

The rural credit market is of two types : organised and unorganised. Within the organised sector we have a number of lending institutions like Cooperatives, Commercial Banks, Land Development Banks, etc. which provide credit for meeting the working capital requirement of cultivating households. The unorganised or the informal credit sector includes a number of private sources like cultivators, neighbours, friends and relatives, professional money-lenders, shopkeepers, etc.

Rural credit market does not operate under competitive conditions. An important feature of this market is that access to credit is far more easier for some groups than others. Within the formal credit market, for example, a number of factors operate and prevent small cultivators from securing adequate loans from the institutions. First, asset-based lending policies followed by formal credit institutions may be expected to discriminate against the small cultivators. Second, transaction costs associated with the borrowings may deter many small borrowers from approaching these institutions. Finally, the political clout of large cultivators in the credit institutions, patronage, arbitrariness and corrupt practices pursued by the financial institutions further limit the small cultivator's access to formal credit. Their dependence on the informal credit market is therefore very high which heightens the possibility of having credit-interlinkages in the informal credit market.

The informal credit market in a peasant economy is not integrated in any sense. The personalised nature of credit transactions has led to a fragmented credit market where borrowers having some access to a given sub-market may have unequal access to another sub-market. Given that the peasants themselves can be differentiated into various sub-classes with differential command over assets such as land, overall productivity and cash-income, both credit-needs as well as the production and consumption loan character of these credit-needs differ between them. The consequence is the disaggregated credit market of the peasant economy, where different classes of borrowers transact with different lender-classes for different categories of loans, with creditor-motives being differentiated accordingly. Within the self-perpetuating peasant economy, the credit-needs of the borrowers are normally met from sources internal to it. Among the internal sources, the cultivator-creditor (including neighbours) are interested in securing the labour services of the borrowers whereas friends and relatives, as an alternative internal source, advance credit to all categories of cultivating households mostly out of their feeling of personal responsibilities towards friends and relatives. Since no usurious motives can be ascribed to either of these creditor - classes, the peasant community, when sourcing credit through sources internal to it, does not display any tendency towards extortionate exploitation.

Depending on the size, purpose and urgency of loans, the peasants very often have to approach certain external sources when such loans are unsustainable within the internal fabric of the peasant economy. Among the external sources, the professional money-lenders and shopkeepers operate out of the sheer motive of earning income through usury whereas the trader-lenders aim at controlling the marketing of output and extracting agricultural surplus from the direct producers.

### 6.2.2 The Interlocking of Transactions

In the rural credit market of the study region the borrowers comprise the owner cultivators, tenants and landless agricultural labourers. Of the borrowers those who do not have non-labour assets which can

be used as suitable collateral, may only be in a position to negotiate loan by future commitment of labour supply and / or standing crop. Among the lenders, those comprising cultivators, neighbours and traders utilise this opportunity and advance loans by interlinking transactions in more than one markets. Credit market thus becomes interlocked with labour, input or output markets.

The types of credit-interlinkages observed in the study area comprise

1. Credit-labour-linkage, whereby the creditors (namely, cultivators, neighbours) ensures the commitment of certain quantum of labour services by the borrowers as part of repayment terms against consumption loans advanced by them.
2. Credit-output-linkage, whereby the creditors (namely, traders) ensures the commitment of certain quantum of output by the borrowers as part of loan repayment against production loans (cash) advanced by them.
3. Credit-input-output linkage, whereby the creditors (namely, traders) advance input loans in the form of seed, fertilizers (i.e. in kind) as a means of ensuring commitment of future output of the borrowing cultivators.

The incidence of interlinked credit transactions is found to be highest among the landless labourers, followed by the tenants, followed by owner cultivators. The potential explanation of this pattern lies in the character of credit-needs in the rural communities of Cooch Behar. As stated at the outset of the present study, the agrarian economy of the district is characterised by prevalence of the peasant-subsistence mode of cultivation, which has moreover been accentuated by land reform and reduction in landholding inequalities following Operation Barga. It is a noteworthy feature of the credit market in the region that demand for consumption loans far outweighs that for production loans. This is possibly due to inefficiency of efforts/means towards agricultural advancement in the absence of a class of really "large" landholders. Consumption loans are generally of short-duration and involve a smaller quantum of money. Thus the inverted demand structure for consumption loans, where consumption - credit needs of the poor are greater than those of the relatively rich, are accorded in the incidence of interlinkages. The poor, being more needy, are more accessible to interlinked credit transactions. This structure is true not only for the poorest of the poor i.e. the landless agricultural labourers, but also for the relatively poorer sections among tenants and owner cultivators i.e. those who own or operate marginal or sub-marginal landholdings.

However, the character of interlinkage in credit-transactions varies between the poorer owner-cultivators, the poorer tenants, and the poor landless labourers. It is seen from the study that output - linkages tend to dominate among marginal and higher categories among both owner cultivators and tenants with upward taper, whereas for sub-marginal categories among them, the frequency of credit-labour linked transactions is higher, rendering them similar to the landless labourers. It may however be noted that although incidence of labour-linkage among tenants as a whole is relatively high, it is not sourced entirely from the credit market, since tenancy-related labour-linkages also constitute a major feature of the study region. Some element of communality exists among poor borrowers although they can not be regarded as constituting a homogeneous group.

It is noteworthy that no large cultivator is found to be involved in credit-interlinkages in our study region. It is generally expected that the capacity of the large cultivators to finance productive activities in agriculture is higher compared to households belonging to lower categories of landholdings which reduces

their dependence on external sources who seek output-linkage. Moreover, the big cultivators are more creditworthy and are therefore more acceptable as borrowers to their friends, relatives and neighbours who do not set any pre-condition before advancing loans. The incidence of credit-interlinkages therefore gradually decline with the economic status of borrowers. Interlinked transactions would therefore appear to be one of many manifestations of rural poverty. The incidence of credit-linkages tends to aggravate among the relatively poorer section of the village community, while the relatively better-off section is largely spared from such linkages. It is the existence of a relatively impoverished rural class that leads to the emergence of interlinkages.

### 6.2.3 Typology of Linkages

In further elaboration of the patterns marked above, credit-labour linkage is observed among the landless agricultural labourers and sub-marginal cultivators while CO/CIO-linkages are found among the marginal, small and medium cultivators. Credit-labour linkage therefore seems to pertain to the weakest section of the village community while CO/CIO-linkage is a phenomenon observable among the relatively better-off cultivators whose crop-income constitute a significant part of their total income. The collateral-poor borrowers would generally prefer to settle the loan obligation in terms of output, and only when this is not possible they would offer their labour services. Such differentiation is of course, partially accounted for by differences in the purposive character of loans. For production loans which are of relatively larger duration and larger magnitude, CO/CIO-linkages are the preferred mode of repayment since utilisation of loans augments output-income. In the case of consumption loans, which are of smaller magnitude and shorter duration the linkage instead is with labour services. Interlinkage therefore appears to be essentially a survival strategy over the class of rural peasant -creditors and borrowers. For the collateral-poor rural households in a backward agrarian economy it offers access to credit-support on non-financial considerations, thus enabling them to sustain subsistence levels and/or enter into major crop-improvement /crop-expansion plans. For the peasant-creditors interlinkages provide some sort of guarantee against absolute labour-shortages that could bid up wage rates during peak season. An external entrant into the credit market is the trader who provides CO/CIO -linked credit support. For the trader the reason for extending such interlinked credit-support is the guarantee of being in command of a certain proportion of the marketable surplus crop which provides him with trading advantages in his commercial activity. The borrowers who borrow from him usually undertake loans for productive purposes. As such the sustainability of the peasant production levels and production improvements (if any) depend on the provision of CO/CIO-linked credit. For this set of reasons the informal rural credit mechanism is the means by which the backward peasant-based agrarian economy perpetuated itself and enables all parties to survive.

It would be interesting to explore whether there are also certain class differences that distinguish labour-linked borrowers from output-linked borrowers. From the pattern of linkages among different classes of households it appears that households with larger availability of family labour but lower per capita operated land tend to link their labour services with the loan-contracts. The labour-linked households in our sample possess a higher family size, higher worker-dependent-ratio but a lower per capita operated land compared to the output-linked borrowers. The borrower with higher percentage of crop-income to total income generally link their output with the loan-contracts. The two classes are therefore seem to be distinctly defined and heterogeneous.

#### 6.2.4 Impact of Linkages

The nature of these credit-interlinkages are not necessarily exploitative in a peasant economy where credit transactions are very often personalised. Labour-linked transactions in our sample region are not exploitative compared to non-linked transactions. The employer-creditors have a more-or-less philanthropic attitude towards local loanees. Evidence for this is seen, for example, when sub-marginal cultivators and tenants receive linked loans from their employers (i.e. neighbours) and are charged no explicit interest. Their labour services are also remunerated at the market wage rate prevailing at the time of work implying no implicit interest charge. The sub-marginal cultivators and tenants therefore do not pay any effective rate of interest on labour-linked transactions. Considering credit-labour-linkage among landless agricultural labourers we also observe that most of the linked labourers do not pay any effective rate of interest. In a limited number of cases, however, the linked migrant labourers (landless) pay implicit interest in the form of wage-cut. But the threshold interest rate paid by the landless labourers on linked transaction is much lower than the same paid on non-linked transactions. The overall picture therefore indicates that credit-labour linkages are not exploitative compared to non-linked credit transactions in our study region.

While considering the variation in effective rates of interest paid by the landless linked labourers, we observed that quantitative factors like loan size and per capita income cannot explain such variation in interest rates adequately implying the necessity of introducing quantitative factors such as nature of loan contract, sources of loan, caste, religion and residential status of the loanees in the analysis. The results obtained from ACOV dummy regression model give us a deeper insight into the problems. The factor under consideration, except for loan size show inverse impacts on effective rates of interest on loans. All qualitative factors account for certain level of mark-down on the rate of interest. Socio-cultural factors thus have considerable importance in determining local credit-relationships and interlinkages, and the caste / religion factor has the highest combined mark-down impact upon threshold interest rate.

Analyzing the joint operation of these qualitative factors it is found that highest mark-downs in interest rate over the entire sample occur for local resident linked loanees borrowing from cultivators, particularly for those belonging to the Scheduled Caste segment. The benefit of lower interest extends even to non-linked SC-borrowers. After the local SC-loanee, the next community in order of mark-down in interest comprises linked muslim loanees borrowing from cultivators, comprising both locally residents and migrants. Loanees belonging neither to SC or muslim categories pay higher effective interest rates because of lowered access to mark-downs, but this category entirely comprises migrants from outside the sample regions.

An analysis of qualitative factors thus establishes that the primary determinant of lower effective interest rates is whether the loan is sourced from cultivator or from others. It is found that cultivator-creditors do not have usurious motives in their lending operations. Noting that cultivator-sourced loans offer greater interest mark-down to linked-labourer this would imply that cultivator-creditors function primarily out of the need to reserve farm-labour services to meet anticipated peak season labour-demand than with other motives.

The next in order of importance are community factors. These are namely of two types - either religious homogeneity of the sub-community (muslim) or caste homogeneity (SC). It is noteworthy that the greater amount of intra-community concessions in terms of interest mark-downs are offered to SC-loanee, followed by muslim loanees, followed by non-SC non-muslim loanees who are generally

migrants. Overall the qualifying criterion for more beneficial loan-terms in the peasant economy therefore appears to be the existence/ absence of some perceived homogenizing factor based on community. Favourable terms including allowance for linked labour services are extended by cultivators to borrowers who are members of their closed community. Entry is barred to new entrants to the village. The highest level of concessions, because of internal cohesiveness of sub-communities, are extended in order of precedence to the indigenous Scheduled Caste community, followed by the muslim community. Migrant loanees are relatively disadvantaged as a result because they share no such affinity either among themselves or with the resident population.

It may be noted in respect of this community factors, that the Cooch Behar Scheduled Castes are much more homogenized than SCs elsewhere, because of ethnic, linguistic and cultural uniformity. The Rajbanshi SC-community is dissimilar to the occupational castes that constitute the SCs throughout India, and as such possesses the shared affinities of a tribal group ( the same community in Assam, for example, has been declared as Scheduled Tribe). Thus the above order of precedence is commensurate with the degree of homogenization - the Rajbanshi SC, being most homogenized, followed by muslims, followed by non-SC non-muslim.

The nature of credit transactions and linkages among the landless agricultural labourers therefore becomes a socio-economic phenomenon in a peasant economy. Traditional community relationships are more important in determining the nature of contractual arrangements in the linked labour and credit markets than economic factors themselves.

While the credit-labour-linkage is seen to be 'benevolent' in nature, credit-output linkage carried on by trader-creditors is always exploitative since the effective rate of interest paid on output-linked transactions is much higher than the rate of interest paid on non-linked credit transactions. The traders charge very high effective rates of interest from the poor indebted peasants which enhance the extraction of agricultural surplus through 'unequal exchange'. The high rates of surplus extraction associated with CO/CIO-linkages faced by the poor indebted cultivators and tenants impose drastic curtailment of their living standards and are therefore poverty-inducing. External i.e. commercial sources of credit-capital thus play a critical role in inhibiting the process of technological diffusion among the small peasants, since a large part of potential income and productivity has to be forgone in meeting interest obligation.

#### 6.2.5 Extended Observations

A separate exploration can also be made of tenancy relations in the study region . The tenancy in the sample region is both recorded and unrecorded. The tenancy contracts with the unrecorded tenants is predominantly a short-term contract valid for a year, or else for a crop-season.

The seasonal tenancy is an important phenomenon recently observed in our study region. A number of marginal, small and medium tenants in our study region lease in additional land in the *rabi* and *boro* season to enter into the highly profitable cultivation of winter vegetables and HYV spring paddy. In a majority of the cases the seasonal tenancy contracts are at fixed rentals unlike the share -cropping arrangements of the normal tenancy. This system satisfies twin objectives of the landowners : they can get some assured rental income without having to participate in the cost of production and secondly, they can evade the provisions of Tenancy Act which empowers the tenant to record his rights to operate the tenanted land on a secured basis. Because of their own resource limitations in financing the highly input intensive *rabi* and *boro* cultivation on seasonally leased-in land, a number of such tenants take

recourse to loans advanced by traders against CO/CIO interlinkage arrangements. It stands to reason that where the seasonal tenant is already committed to a large amount of loan-backed expenditure on the seasonal crop, sharecropping type of lease-in arrangements would render seasonal tenancy unviable; on the other hand, for whom the lands occupied by seasonal-lease would otherwise remain uncultivated, is willing to forgo crop-sharing in favour of fixed rent.

In the present study we observed that the lessors to the tenants in the sample belong mostly to the small, medium and large landowning categories and as such, the possibility of distress lease is low. All categories of tenants are free to lease in land from as many lessors as they may wish to, or can otherwise afford to, given their own access to other resources. Lease-contracts with any particular lessor do not bar them from leasing in land from others. Hence no 'feudal tying' of tenant to particular landlords is observed in terms of landlease.

The participation of the tenants of the sample region in the recording of landright under Operation Barga (OB) is not very high. More than three fourth of the sample tenants did not officially record their tenancy and consequently remain under non-legalised tenancy arrangement. Most of the unrecorded tenants, however, reported that they did not opt for recording 'to maintain their long-standing good relation with the landlords', which would also subsume the local community - based personal support. The overall picture seems to indicate that it has been a voluntary decision by a large section of tenants not to go in for recording. We therefore find no direct evidence to substantiate that the semi-feudal authority of the landlords prevented the tenants from recording their names as is indicated in some other studies.

Sharecropping is the dominant form of tenancy arrangement in our study area. The most prevalent form or crop-sharing arrangement is the 50 : 50 division of the produce. Production of winter vegetables and HYV paddy is gaining popularity under fixed rental system.

The incidence of cost-sharing by the landlord within the sharecropping arrangement has been very low in our study area. Where cost-sharing exists, the majority of cases show output distribution in 50 :50 ratio between the landlords and the tenants. But there is hardly any case where the cost-sharing itself is made strictly on 50 :50 basis, the tenants' share in cost invariably being higher than the landlords' share however small that may be. The overall picture seems to indicate that in vast majority of cases the existing tenurial arrangements do not conform to the provisions of the Tenancy Act, whereby landlords are entitled to between 25 - 50 percent of produce depending on whether they support no costs or else all costs excepting labour.

There is virtually no interlinkage between tenancy and credit contracts. The credit market of the tenants is not dominated by their own landlords but is dominated by non-landlord loan sources such as traders, friends and relatives, neighbours, professional money-lenders, shopkeepers, etc. On the strength of our empirical observations we can therefore contradict Bhaduri's hypothesis that the existence of interlinkage between landlease and credit markets acts as a fetter on agricultural development. This is because the landlords, not being major loan-source for tenants and not charging usurious interest rates or deriving significant incomes from usury, therefore do not find the profitable market for usury to act as a disincentive towards productive investment, as had been suggested by Bhaduri. Since no opportunity cost is therefore involved in the commitment of expenditure by the landlord towards production, there is no disincentive towards agricultural improvement.

There is, however, some evidence of interlinkage between landlease and labour contracts. Some tenants, being drawn largely from agricultural labour families, are offered landlease contract with the understanding that they would provide labour services for the cultivation of self-operated land by the landlords. All such labourers receive market wage rate prevailing at the time of work. They can enter in the free labour market when there is no pre-committed work with their landlords. Tenancy - labour linkage, however, indirectly dissuades the tenants from entering into credit-labour linkage with any other source. This does not, however, amount to adequate evidence to deduce a semi-feudal agrarian character within the tenancy labour linkage. Under the tenancy-labour linkage, the tenants depend on the landlords for their lease -contracts in lieu of which they contract to work for the landlord against due payment. This interdependence / voluntary exchange arises purely from economic consideration. The tenants' need for a lease contract and the landlords' need for readily available labour - and not feudal subordination - provide the major motivation for tying tenancy with labour contracts. There may still be some element of unequalness in this exchange between contracting parties in the sense that the commitment of labour on the part of the tenant is an additional extraction by the landlord over and above the crop-share he is normally to receive. However, this unequalness is a feature of the land market, and therefore not exploitative, a fact further established by the absence of any wage- reductions against tenancy-tied labour.

A similar separate exploration can be made into agricultural labourer in the sample region. Agricultural labour is provided by marginal/sub-marginal owner cultivators and tenants on the one hand and by landless labourers on the other. Whereas labour activity by the former group is more in the nature of subsidiary occupation, and is moreover restricted by the amount of time they have to devote to their own cultivation, the same does not hold true for the second group, for whom labour activity constitutes their sole livelihood. As such, landless agricultural labourers can be considered the most vulnerable section among the rural labouring community in the sample region and would be most open to interlinkage-based exploitation, if such exploitation were proved to exist. The earlier analysis of the nature of linkage does not however prove any exploitative character for such linkages.

Going into the character of the landless labour class we observe the existence of homogenizing factors between worker and cultivator-employer, such as community, religion or local residence. There is a class of newly migrated landless labourer in the study region, to whom the protection of community and religion do not extend. Since the analysis in the present study has been made on the basis of the mark-downs in effective interest rates payable that can be attributed to each qualitative/quantitative factor, the migrants as a group receive the lowest mark-downs.

The existence or absence of exploitative interest rates in interlinked credit transactions is of course relatively determined. Although relative exploitation in the sense of usury is not seen, particularly when loans are sourced from cultivator-creditors, effective rates of interest would still be high, compared to the formal credit market with collateral-backed loans. However, disaggregatedness of credit market access to landless labourers on the basis of qualifying factors is sufficiently established.

Regarding the form of labour-linkage observed in the sample regions, two types tends to predominate. These are, namely, attached labourer and semi-attached labourer. The attached labour arrangement makes a virtual house-servant of the landless labourer who enters into a labour-linked credit arrangement with employer. This form is relatively uncommon. The more predominant form of linkage observable is that of semi-attached labourer where the labour of the landless borrower is committed for shorter periods generally verging around the agricultural season and usually, much shorter than that. It would appear that the period of labour commitment is conditional to the size of loans, and since the loans taken by landless labourers are usually in small amounts for consumption purposes against quick

repayment, the semi -attached type of linkage predominates. It is not until levels of poverty becomes materially depressed that the semi-attached linkage shall verge towards longterm attachment or virtual bonding. The effective rates of interest charged to landless labourers are not in any case an accessory to such a trend towards augmentation of absolute poverty, since they are not usurious in character.

In such circumstances it seems more relevant to view the credit market access afforded to landless agricultural labourers from the community sense rather than in terms of semi-feudal deprivation since their credit-needs are still generally small and is moreover serviced without explicit or even implicit interest charges in most cases. The CL-linkage that exists for them therefore may be viewed as a work - guarantee from their respective, and labour-guarantee from the perspective of their creditors, neither of which is intrinsically exploitative. Cultivator-creditors are of course, as earlier remarked on, guaranteed a fixed labour supply at fixed wage rate, instead of having to compete in the labour market with other cultivators which would raise wage rates considerably. To this extent, the CL-linkage does represent an extraction on the part of the creditors, but the magnitude of this is nominal.

### 6.3 Regression Analysis

In our study we have applied the yardstick of effective rates of interest paid by the borrowers to access the relative merits and demerits of the contractual arrangements in the informal credit market. Effective rate of interest is defined as the sum of implicit (or hidden) and explicit (or stipulated) rate of interest. Implicit rate of interest has a special reference to interlinked credit transactions. When the input factors (say, labour) and /or product prices are undervalued, the difference between prevailing market price and price actually paid to the factor/product constitutes the implicit interest charge. Implicit interest may be zero where there is no undervaluation of product/factor prices (for example, when linked labourers get market wage rates prevailing at the time of work). Explicit rate of interest, on the other hand, may arise irrespective of the nature of loan-transaction. Just as institutional loans carry a rate of interest, private loans (whether linked or non-linked) may also carry an explicit rate of interest on the amount of loans advanced. Theoretically, therefore, interlinked credit-transactions may carry both implicit and explicit rates of interest. Non-linked credit transactions can however carry only explicit rate of interest unless the loan happens to be interest-free.

The type of CL-linkage evidenced in our sample survey does not carry any element of explicit interest. The effective rate of interest in connection with CL-linkage therefore corresponds to implicit rates only. CO/CIO-linkage on the other hand carries both implicit and explicit rates of interest and both rates are therefore included in the determination of the effective rate of interest. When we therefore use the term effective rate of interest in connection with CL-linkage, this would imply implicit rates of interest and when the term is used in connection with CO/CIO-linkage it would imply the combined effect of both implicit and explicit rates.

A separate econometric analysis has been made in the study of the micro-economic factors governing the determination of effective interest rates, through recourse to a regression model based on the standard quantitative theory of determination of interest rates in a credit market, and has been applied to sorted sub-population among landless borrowers sorted by the linked/non-linked nature of credit arrangements, the residuary status of the borrowers, and the internal or external nature of loan-sources.

In the standard quantitative theory of determination of interest rates for credit markets, loan size and per capita income play the most important determining role. An increase in loan size is expected a

*priori* to reduce the rate of interest through a reduction in transaction costs. A rise in per capita income (which reflects the economic status of the relevant borrower) is also believed to lower the interest rate through increased bargaining power of the borrower. The regression results relating to the sorted sub-population of landless borrower capture the intrinsic differences in rate of interest and relative importance of loan size and per capita income between the sorted-categories. The results reveal that the borrowers belonging to different sorted-categories derive differential degrees of benefits/penalty with regard to threshold i.e. entry-level interest rates. The threshold rates are defined as the average rate of interest payable by a loan-receiptant at the point of entry into the credit arrangement. It has been observed that locally resident loanees pay the lowest (and negative) threshold interest rate, the implication of negative threshold interest being that even if there is possibility of loan default, this is condoned upto a point by the creditor. The creditor thus has a more-or-less philanthropic attitude towards loanees who are longtime local residents. We observe that all local loanees in the sample pay zero effective rate of interest, and thus that the transaction cost on the loan is borne entirely by the creditor with no effort to recover even this from the borrower thus accounting for the negativity of threshold rate. In contrast, migrant labourers face much higher threshold rates, which therefore created an entry-barrier to their availing such loans. Findings from the regression also reveal that linked-loanee generally pay much lower threshold rates compared to non-linked loanees and that cultivator-sourced loans carry much lower threshold rates compared to shopkeeper-sourced loans. The overall analysis therefore indicates that the cultivator-sourced linked loans directed to local loanees are given at most preferential terms within the overall informal credit arrangements, a fact further established by the qualitative analysis the results of which have been reported earlier in this section.

The *a priori* expectation regarding the behaviour of loan size is not, however, fulfilled. Except in the case of loanees borrowing from shopkeepers, the interest elasticity of loan size for all other sorted-categories is positive indicating a direct relationship of rate of interest with loan size. Loan size is in fact the most important determinant of interest mark-ups including also the case of cultivator-sourced loans. Only for loanees borrowing from shopkeepers does loan size relate to an interest mark-down. This indicates a fundamental difference in motivation of these two sources of lending. The cultivators mark-up the rate of interest with increase in loan size and discourage larger-sized loans. Commercial money-making through lending is therefore not the objective of the cultivator-lenders and they advance loans primarily to link the labour services of the loanees. In contrast, the shopkeepers are concerned solely with the objective of earning usury income, and mark-down rates of interest with increasing loan size thus fostering indebtedness.

The response of rate of interest to changes in per capita income, however, follows normal expectations that rises in per capita income lead to decline in rate of interest because of increased bargaining power of the loanees, except in the one case of loanees borrowing from shopkeepers. PCI is therefore the major determinant of mark-down in interest rates. Only in case of loanees borrowing from shopkeepers, i.e. from an external creditor is the PCI responsible for interest mark-up. The mark-down factor due to PCI is however very low reflecting weak bargaining positions for loan-receiptants in general. Even so, mark-down factors on account of PCI are much stronger for linked loanees compared to non-linked loanees. This implies that the linked loanees enjoy much more bargaining power, commensurate with their ability to determine labour supply in the peak season. As already noted, the motivation of lending of the shopkeeper completely differs from that of cultivator-creditors, and increase in PCI of the borrowers would increase the possibility of extracting more surplus from them. As a result the PCI of borrower determines an interest mark-up for loanees availing shopkeeper-sourced loans.

#### 6.4 Review of Findings

In the analysis just concluded with reference to landless labourers, one again sees the presence of external (usurious) loan-sources as the village shopkeepers and internal (non-usurious) loan-sources in terms of the cultivator-creditors. It should be noted that the clientele in this case i.e. the landless labourers do not seek credit for productive purposes. Unlike owner cultivators and tenants, their needs are entirely consumption-based. As such, the informal credit market among them is purely a consumption-oriented market with the resultant characteristic of being of short-period and lower volume nature. Within this market, labourers indentified as belonging to the resident community receive preferential terms against labour-linkage and therefore do not have oppressing need to tap external sources. It is only newly migrated labourers who are perceived as being alien to the local peasant community on various qualitative criteria who have to seek external credit-support on account of the internal credit market either being closed to them or else offering detrimental terms. Once again, within the local peasant community as it is qualitatively defined, the informal credit arrangements are self-perpetuating and provide mutual non-usurious benefits to both creditors and borrowers.

Assessing the rural informal credit market therefore in all its manifestations among all classes of peasantry, it is observed that marked demarcation exists between internal and external sources of loans. In the absence of a strong organised formal credit-structure, the members of the rural community can meet their loan-demand through minor community sources. Interlinkages that arise in such cases usually relate to labour services and are not intrinsically exploitative or usurious in nature, therefore indicating no exercise of semi-feudal prerogatives on the part of internal creditors. In fact the only motive for such linkage on the part of creditors reflect rural labour market situations and are a hedge against absolute labour shortages at critical times within the agricultural season. If at all there is a deleterious element in this arrangement, it is that wage fluctuations over the course of the agricultural season are restrained so that the highest level of agricultural wage rates do not reach their natural peaks. As shown earlier however this is not itself bad for the labouring community, since although their time rates of wages are not maximised, their time rates of labour time do increase on account of greater availability of confirmed work.

It is only when credit-needs of sections within the peasant economy outstrip the capacity of internal sources to sustain them, i.e. when the loans demanded are of relatively longer duration, or of relatively larger size, or else carry a much greater risk-possibility that the internal credit market fails to survice them. This infact is the point of entry of external loan-sources within their more exploitative and usurious character targeted at the maximisation of extraction of rural surplus.

It may however be noted that only two categories of borrowers are open to transactions with external lenders. These are namely owner cultivators or tenants seeking production loans who are therefore subjected to CO/CIO-interlinkages by trader-creditors, and newly migrated (and therefore move vulnerable, in the absence of local community support) labourers, for consumption loans that have to be taken from village shopkeepers. A certain quantum of this exteranlly sourced loans are also financed by purely usurious money-lenders, which apply for both production and consumption loans taken by sub-marginal, marginal and small peasants, who do not have much asset-collateral to offer and therefore have to accept the penalty of facing usurious rates of interest.

In substance therefore, the internal credit-sources within a backward peasant economy are capable of sustaining its credit-needs at low levels i.e. without significant rates of agricultural development. A

peasant economy, left to itself, is self-perpetuating even to the extent of keeping production and consumption levels stagnant. In order to increase these levels some recourse to external sources of borrowing becomes necessary, but in the informal market this introduces elements of pure usury and usurious interlinkage, which overtime can lead to massive rural indebtedness. It is therefore not the CL-linkage, but the CO/CIO-linkage that has to be specifically guarded against. These means for such safeguarding and for providing additional protection and support to vulnerable sections of the peasantry may now be discussed.

## 6.5 Suggested Interventions

From the analysis of findings it appears that interlinkage is an institutional arrangement developed in response to inadequacies generated by imperfections in land, labour, credit and product markets in a poor agrarian economy. It has thus developed through a natural evolutionary process to fulfil certain demands of a backward agricultural economy. In the context of community-based peasant agriculture such as that found in our study area this evolutionary process subsumes within it a set of socio-cultural factors which adds a new feature to the whole issue of interlinkage.

Looking at credit-labour linkages, for example, we observe that labourers enter into these arrangements with reference to certain qualifying factors. Local labourers, for instance, when sourcing loan from cultivators, are generally offered CL-type of linkages in lieu of collateral, which has been seen to be non-exploitative and non-usurious in character. It has already been shown that intra-community relationships are much more important to our study area than the basic economic factors, and cultivators belonging to particular sub-communities offer credit at concessional terms to the members of their own closed communities. These socio-cultural factors therefore determine the nature of credit-labour linkages, which in the context of the peasant economy of our study area, happen to be mutually beneficial to both creditor-employers and labourer-borrowers, in the sense that employers' needs for an assured labour supply and labourers' demand for low-priced consumption loans are both simultaneously satisfied. CO/CIO-linkages such as those seen between traders and relatively larger owner cultivators and tenants though exploitative in nature and fostering surplus extraction are also inevitable outcomes of imperfections prevailing in credit and output markets. This is so since the mechanism of CO/CIO-linkages ensures that the effective rate of interest on loans is escalated through the invisible means of overpricing inputs supplied and/or underpricing committed output, so that the cash incomes and therefore the real marketable surplus accruing to borrower-cultivators are correspondingly reduced, implying an extraction of surplus. Even so, the willingness of borrowers to contract loans on such terms stems from their lack of collateral means. In both CL and CO/CIO-linkages, some non-marketable collateral (e.g. future labour services or future output) are accepted by creditors against loans to the informal credit market, which would otherwise have been unacceptable to the formal credit market. Interlinkage therefore ensures double coincidence of creditor-borrower wants without which the imperfectly monetised economy would tend to be inefficient in respect of allocation of financial resources.

Although interlinkages are thus seen to be natural outcomes of certain market inadequacies, their presence does not intrinsically guarantee long-term benefits to the linked households. We had noted earlier that the CL-linkage is less exploitative and non-usurious in nature and can be sustained within the internal economic structure of the peasant economy. The CO/CIO-linkage is however usurious in nature and enhance surplus extraction through the process of unequal exchange as just described. The impact of the surplus extraction is initially felt by the borrower in terms of reduced profit from cultivation, but

since this reduction also reduces the cultivators' capacity to invest on further crop-expansion or technology-induced productivity expansion, a secondary impact also falls on labourers in the peasant community in terms of the resultant non-creation of additional man-days of employment, and the sacrifice of further potential income on the part of both borrower-cultivator and labourer. This category of linkage is therefore poverty-inducing and deters technological diffusion among the poor cultivating households and hence needs to be specifically guarded against.

#### 6.5.1 Entry & Delivery of Formal Credit

It appears therefore from the above analysis that some sort of credit intervention has to be made in a systemic manner to tackle the problem of backwardness in the agrarian economy in general, and the character of interlinkages in particular. Since the internal means of credit expansion in the peasant economy are necessarily limited by absolute levels of poverty, such intervention has to be external. Two avenues for external credit interventions exist, namely either through external sources within the internal credit market, or through the entirely exogenous formal credit interventions.

The increased flow of formal credit into the peasant economy however *a priori* lead to an increase in agricultural production and overall agricultural productivity thus enabling the agrarian economy to move beyond its low-level equilibrium of low production and consumption. But as noted earlier in the literature and also in the sample study, the access of all sections of the rural community to formal credit is not uniform. Some sections of the rural community are more advantaged than others because of collateral-backed access to the formal credit market. It has been observed in the present study that formal credit tends to gravitate towards better-off farmers. Asset-based lending policies followed by formal credit institutions therefore tend to lower the access of the small peasants to the formal credit market and increase more inequality. Transaction costs expand for small size loans, and thus also discourage small borrowers from approaching these institutions. Given these weaknesses in delivery of formal loans, although the recommendation of the present study is for an expanded flow of formal credit into the peasant economy, direct participation of formal institution may be unworkable and counter-productive. In such circumstances an alternative means of entry for formal credit into the agrarian economy has to be formulated. Reviewing this background and the need for external credit interventions, we note the following :

(1) Formal credit has a special role to play in increasing overall production and productivity and in promoting technological transformation of a backward agriculture. This role derives from its cheap and equitable character, *vis-a-vis* the traditional external lenders in the informal market. However, access to it is irregular and larger peasants in our study area, although placed in a relatively advantageous position in terms of access to the formal credit market, are not also adequately served with working capital, thus keeping their overall production at low level. The labourer class, which depends on them both for work and consumption loans, is thus seen to live on the verge of subsistence as scope of employment in agriculture is severely limited. One way to solve the problem of agrarian backwardness is to provide adequate production loan support to the larger cultivator which will reduce their dependence on exploitative external sources such as traders, professional money-lenders, etc. Substitution of credit sources in the manner lead to capital accumulation within agriculture, greater investment, and higher production and incomes for the cultivating class. Demand for labour and overall employment opportunity within the agricultural sector will therefore increase bringing benefits to the labourer class. The severity of CO/CIO-linkage may also be reduced to a significant extent, by extension of formal credit.

(2) However, in the face of unequal access as posed by direct intervention of formal institutions, perhaps the most viable way to solve the problem of rural backwardness and interlinkages is to sustain and improve credit-support to all sections of the peasant community, including the rural poor, by targeting them from within the peasant system. For this, inflows of formal credit can best be made within the structure of the community-matrix of the peasant economy that has been observed within the study. Such an approach would resolve two problems that currently limit the efficacy of formal credit. Since the credit flow envisaged would be delivered indirectly instead of directly as at present, accessibility to it could be widened to cover all sections of the rural community. This would prevent the formal credit flow from increasing rural inequalities and thus coercive power of rural rich. Secondly, the indirect means of credit delivery envisaged, would resolve the problems associated with the extension of credit-support to collateral- poor marginal and sub-marginal cultivator and labouring class. The means for such credit extension can be created by formation of community based-credit cooperatives within each village.

### 6.5.2 The Cooperative Structure

It is necessary to first outline the reason for such recommendation. The cooperative experiment in India has a long and varied history which spans both rural and urban sectors, both agricultural and non-agricultural functions, and both marketing and credit operations. Experience has been varied. Some of the strongest rural cooperative experiments have been in activities as diverse as dairing, horticulture and fisheries, all of which essentially involve marketing or distributive operations. An institutionalised structure for funding and financing cooperatives exists through organisations like the National Agricultural Cooperative Marketing Federation (NAFED). The origins of the Agricultural Cooperative Marketing Federations lie in the policy of divesting the middle-tier of district marketing agencies of those functions that can be legitimately brought into the purview of primary co-operative societies. Since the resultant two-tier structure has met with some success in rural marketing operations, with the number of primary or registered societies showing continuous increase, replication of the cooperative experiment with respect to rural credit can also be conceived.

One of the strengths of the rural peasant community observed in the study is the willingness of this community to interrelate at socio-cultural level. As remarked, the system of interlinkage within the internal informal credit market has emerged to compensate for market inadequacies such as absence of collateral means or the need for credit support to consumption, besides production. It is noteworthy that the rural community is willing to extend such support to its members within its limited means, without any exploitative or usurious motive. The CL-linkage is a case in point. The labour committed by the borrowers against the advance of loan is actually a physical substitute for collateral-means, and moreover does not involve any undervaluation of the future service. By willingness to accept such interlinkage the labourer is able to draw credit-support from the community, where none would be forthcoming.

This community-based internal credit-support mechanism is entirely informal, and therefore does not have sufficient capitalisation capacity. The experience of the present study would suggest that the informal credit system be formalised through the institution of community-credit cooperatives. Credit flow from formal credit institutions could then flow into the peasant community by interaction with these cooperatives.

The village resident's perception of his community is generally limited to his village. The present structure of the co-operative movement in terms of an institutional apex thus makes the cooperative institution appear a little remote i.e. formal to the village resident. Unless the peasant can identify with

the cooperative institution as 'his own' institution an element of parallel competition exists between the cooperative credit market and the community-based informal internal credit - support. This can only be reversed by organising cooperative credit in the form of primary rural cooperatives for each village. Although the functions of the primary cooperative would initially be specialised towards provision of credit, they would in every other sense function in extension of participative rural institution such as the panchayats.

Such cooperative would have to cater to all minor credit-needs of the community and would therefore have to provide both production loans and consumption loans. For truly participative nature they would thus have to involve owner cultivators as well as tenant farmers and labourers, functioning as a non-government self-help institution. Certain intrinsic advantages of the rural community would extend into the cooperative institution. For example, the use of non-exploitative interlinkages in lieu of collateral from those seeking loans, which is unacceptable to formal institutions could continue. This would ensure equity of access and resolve one of the problems facing formal credit institutions.

Provided the cooperative could offer adequate credit-support, this would gradually eliminate the entry of exploitative external traders, money-lenders, etc. into the rural credit market. However, the capitalisation capacity would need to be augmented and for this the cooperative institution could transact for (concessional) loans with the formal banking institutions, over and above any seed money to be provided by the government. The capacity of the institution to generate its own resources could also be augmented by its participation in crop-insurance, and crop-loans against recovery of normal transaction costs and risk premia.

One question that may potentially attach to the formation of the rural credit cooperatives relates to the problems of recovery of loans. Experience with bad agricultural debt in the country has been marked, but it is to be noted that the irrecoverable debt has been associated with priority sector loan-inflow from formal banking institutions, where loan - issue is made directly to the client without adequate facility for pecuniary recovery. In the light of this experience, the community credit cooperative would probably prove to be a better vehicle for priority-sector lending. Firstly, being administered by the community, it would provide in-built community-based moral suasion to discourage default. Secondly, in the face of absolute inability to repay, the credit institution would find physical means of repayment such as commitment of labour or output to be acceptable since it would include cultivators among its member, which is not true in the case of banking institutions.

The need for this community credit cooperative arises from the need to import the strengths of the peasant mode of agrarian organisation into its formal credit- support structure. It is suggested that the cooperative experiment be initially carried out in terms of Pilot-Projects in certain villages where peasant mode of agrarian organisation is particularly strong. In the light of the resulting experience, refinements could be made to the organisation and, statutory bye-laws of the cooperative. Successful operation of the cooperative would enable the diversification of its activities to jointly cover both credit and marketing and also permit an eventual venture into agro- based industrialisation of the villages.

The advantages that a viable cooperative credit organisation has to offer to the peasant community observed in the study region are numerous. By depersonalising the creditor -borrower arrangements of the informal credit market it would promote equality of support and enhance cohesion between rural sub-communities which are still distinguished in terms of ethnicity and religion. This being supplemented by a reduction, rather than extension of rural inequalities, would enable agrarian tension to abate and

prevent the type of rural dichotomisation that can lead to the emergence of a rural elite with coercive powers even from the midst of a peasant economy, and would thus promote agrarian development without compromising the peasant character of the rural economy.

#### 6.6 Developing an Agrarian Economy

It must be noted that agrarian means for agrarian development are at best a short-term measure for developing the economy of an agrarian region. They however need to be contemplated because of the lack of a potential break-through in the foreseeable future in regard to non-agricultural means of development such as industrialisation, urbanisation, etc. This appears to be true for Cooch Behar where insufficient economic headway has been made outside the agricultural sector, and it is likely that this situation may persist for some time yet. However, the non-agricultural means of development are not an unqualified blessing, as the Indian experience has shown, because they lead to widening of the rural-urban divide, to problems of regional imbalances, and to usurpation of the fruits of development by the very few. This experience shows that the viability of the development initiative depends on decentralised developmental processes that take development to the grass-roots. In support of this argument, the present study has shown that the rural community possesses its own distinctive strengths, and tuning of development strategy with this strengths can promote all-round growth of the economy.

## BIBLIOGRAPHY

### Books

1. Anderson, P.(1966) : *Lineages of the Absolutist State*; London : New Left Books
2. Axelrod, R. (1984) : *The Evolution of Cooperation*; New York : Basic Books
3. Bandyopadhyay, A. (1984) : *Economics of Agricultural Credit*; New Delhi : Agricole Publishing Academy
4. Bardhan, P.K. (1984) : *Land, Labour and Rural Poverty : Essays in Development Economics*; Delhi : Oxford University Press
5. Bardhan, P.K. (ed.) (1989) : *The Economic Theory of Agrarian Institutions*; Oxford : Oxford University Press
6. Basu, K. (1984) : *The Less Development Economy : A Critique of Contemporary Theory*; Oxford : Basil Blackwell
7. Bhaduri, A. (1983) : *The Economic Structure of Backward Agriculture*; London : Academic Press
8. Bharadwaj, K. (1974) : *Production Conditions in Agriculture*; Cambridge : Cambridge University Press
9. Bharadwaj, K.(1980): *On Some Issues of Methods in the Analysis of Social Change*; Mysore: Mysore University Press
10. Binswanger, H.P. and Rosenzweign, M.R. (1984) : *Contractual Arrangements, Employment and Wages in Rural Labour Markets in Asia*; New Haven : Yale University Press
11. Breman, J. (1974) : *Patronage and Exploitation : Changing Agrarian Relations in South Gujarat*; Berkley : University of California Press
12. Byres, T.J. (ed.) (1993) : *Sharecropping and Sharecroppers*; London : Frank Cass
13. Choudhury, Benoy (1981) : *Banglar Bhumibyabasthar Ruprekha* ("Outline of the Land Settlement of Bengal"); Calcutta : National Book Agency
14. Chayanov, A.V. (1966) : *The Theory of Peasant Economy*; (D.Thorner, R.E.F. Smith and B.Kerblay,ed.) Homeward, Illinois, Irwin
15. Cheung, S.N.S. (1969) : *The Theory of Share Tenancy*; Chicago : University Press
16. Dasgupta, Satadal (1986) : *Case, Kinship and Community : Social System of a Bengal Caste*; Madras : University Press
17. Desai, M. et al. (1984) : *Agrarian Power and Agricultural Productivity in South Asia*; Delhi : Oxford University Press
18. Donald, G.(1976) : *Credit For Small Farmers in Developing Countries*; Boulder, Colorado : Westview Press
19. Griffin, K. (1979) : *The Political Economy of Agrarian Change*; London : Macmillan
20. Mallick, Ross (1993) : *Development Policy of A Communist Government - West Bengal since 1977*; Cambridge : Cambridge University Press

21. Marshall, A. (1920) : *Principals of Economics*; London : Macmillan
22. Mazumdar, D.D. (1977) : *West Bengal District Gazetters, Cooch Behar*; Calcutta : West Bengal Government Press
23. Olson, Wendy (1996) : *Rural India Social Relations : A Study of Southern Andhra Pradesh*; Delhi : Oxford University Press
24. Pany, R. (1985) : *Institutional Credit for Agriculture*; New Delhi : Ashish Publishing House
25. Patnaik, Utsa (ed.) (1990) : *Agrarian Relations and Accumulation*; Oxford University Press
26. Platteau, J.P., Murikan, J., and Delbar, E. (1981) : *Interlinkage of Credit, Labour and Marketing Relations in Traditional Marine Fishing : The Case of Purakkad (Kerala)*; Delhi : Hindustan Publications
27. Platteau, J.P., Murikan, J., and Delbar, E. (1985) : *Technology, Credit, and Indebtedness in Marine Fishing : A Case Study of Three Villages in South Kerala*; Delhi : Hindustan Publishing Corporation
28. Rao, C.H.H. (1975) : *Technological Change and Distribution of Gains in Indian Agriculture*; New Delhi : Macmillan
29. Rudra, A. (1981) : *Paschim Banglar Bargadar* ("West Bengal's Bargadar"); Calcutta : Kathasilpa
30. Rudra, A. (1982) : *Paschim Banglar Krishite Utpadan Samparkar O Shrenibinnyas* ("Production and Class Relations in West Bengal's Agriculture"); Calcutta : Kathasilpa
31. Rudra, A. (1982) : *Indian Agriculture : Myth and Reality*; New Delhi : Allied Publishers
32. Rudra, A. and Bardhan, P. (1984) : *Agrarian Relations in West Bengal : Results of Two Surveys*; Bombay : Somaiya Publications
33. Sarap, K. (1991) : *Interlinked Agrarian Markets in Rural India*; New Delhi : Sage Publications
34. Schotter, A. (1981) : *The Economic Theory of Social Institutions*; Cambridge : University Press
35. Sen, A.K. (1975) : *Employment Technology and Development*; Oxford : Calendon Press
36. Sen, Bhowani (1962) : *Evolution of Agrarian Relations in India*; People's Publishing House
37. Shah, C.H. et al. (eds.) (1978) : *Agricultural Development of India, Policy and Problems*; Bombay : Himalaya Publishers
38. Sinha, R.(1976) : *Food and Poverty : The Political Economy of Confrontation*; New Delhi : Ambika Publication
39. Smith, A. (1776) : *An Enquiry into the Nature and Causes of the Wealth of Nations*; New York : Modern Library
40. Thorner, D. and Thorner, A. (1962) : *Land and Labour in India*; New York : Asia Publishing House
41. Thorner, D. (1964) : *Agricultural Cooperatives in India: A Field Report*; Bombay Asia Publishing House
42. Von Pischke, J.D., Adams D.W. and Donald, G. (eds.) (1983) : *Rural Financial Markets in Developing Countries : Their Use and Abuse*; Baltimore : The Johns Hopkins University Press

## Articles

1. Adams, D.W. and Nehman, G.I. (1979) : 'Borrowing Costs and the Demand for Rural Credit'; *Journal of Development Studies* 15 (2) : 165-76
2. Adams, D.W. and Vogel R.C. (1986) : 'Rural Financial Markets in Low Income Countries: Recent Controversies and Lessons'; *World Development* 14(4) : 477-87
3. Adams, D.W. and Rask, N. (1968) : 'Economics of Cost-Sharing in Less Developed Countries'; *American Journal of Agricultural Economics* 50 : 935-45
4. Ahmed, M. (1974) : 'Farm Efficiency Under Owner Cultivation and Share Tenancy'; *Pakistan Economic and Social Review* 12 : 132-143
5. Alchian, A. and Demsetz, H. (1972) : 'Production, Information Costs, and Economic Organisation'; *American Economic Review* 62 : 777-95
6. Allen, F (1982) : 'On Share Contracts and Screening' ; *Bell Journal of Economics* 13 : 541-47
7. Akerlof, G.A. (1970) : 'The Market for 'Lemons' : Qualitative Uncertainty and the Market Mechanism' ; *Quarterly Journal of Economics* 84: 488-500
8. Basu, K. (1983) : 'The Emergence of Isolation and Interlinkage in Rural Markets'; *Oxford Economic Papers* 35 : 262-80
9. Basu, K. (1984) : 'Implicit Interest Rates, Usury, and Isolation in Backward Agriculture'; *Cambridge Journal of Economics* 8: 145-59
10. Basu, K. (1986 a) : 'One Kind of Power'; *Oxford Economic Papers* 38(2) : 259-82
11. Basu, K. (1986 b) : 'Market, Power and Social Norms'; *Economic and Political Weekly* 21(43) : 1893-96
12. Basu, K. (1987) : 'Disneyland Monopoly, Interlinkages, and Unsurious Interest Rates'; *Journal of Public Economics* 34 : 1-17
13. Basu, K., Jones, E. and Schicht, E. (1987) : 'The Growth and Decay of Custom : The Role of the New Institutional Economics in Economic History'; *Explorations into Economic History* 24 : 1-21
14. Bardhan, P.K. (1989) : 'Alternative Approaches to the Theory of Institutions in Economic Development', in Pranab Bardhan (ed.) *The Economic Theory of Agrarian Institutions*. Oxford University Press : Oxford
15. Bardhan, P.K. (1989) : 'A Note on Interlinked Rural Economic Arrangements', in Pranab Bardhan (ed.) *The Economic Theory of Agrarian Institutions* Oxford University Press : Oxford
16. Bardhan, P.K. and Rudra, A. (1978) : 'Interlinkage of Land, Labour and Credit Relations : An Analysis of Village Survey Data in East India'; *Economic and Political Weekly* 13 (6.7) : 367-84
17. Bardhan, P.K. and A. Rudra (1981) : 'Terms and Conditions of Labour Contracts in Agriculture: Results of a Survey in West Bengal', 1979; *Oxford Bulletin of Economics and Statistics* 43 : 89-111
18. Bardhan, P.K. and Singh, N. (1987) : 'A Note on Moral Hazard and Cost Sharing in Share Cropping'; *American Journal of Agricultural Economics* 69 : 382-83
19. Bardhan, P.K. and Srinivasan, T.N. (1971) : 'Cropsharing Tenancy in Agriculture : Theoretical and Empirical Analysis'; *American Economic Review* 62 : 48-64
20. Baily, F.G. (1966) : 'The Pleasant View of Bad Life'; *Advancement of Science* : 395-409
21. Bardhan, P.K. (1973) : 'On the Incidence of Poverty in Rural India in Sixties'; *Economic and Political Weekly* 8 (4/5/ 6): 245-54
22. Bardhan, P.K. (1977) : 'Variations in Forms of Tenancy in a Peasant Economy'; *Journal of Development Economics* 4 : 105-18
23. Bardhan, P.K. (1979) : 'Wage and Unemployment in a poor Agrarian Economy : A Theoretical and Empirical Analysis'; *Journal of Political Economy* 87(3) : 479-99
24. Bardhan, P.K. (1980) : 'Interlocking Factor Markets and Agrarian Development : A Review of the Issues' ; *Oxford Economic Papers* 32 (1) : 82-98

25. Bardhan, P.K. (1982) : 'Agrarian Class Formation in India'; *Journal of Peasant Studies* 10: 73-94
26. Bardhan, P.K. (1983) : 'Labour-tying in a poor Agrarian Economy : A Theoretical and Empirical Analysis'; *The Quarterly Journal of Economics* 98(3) : 501-14
27. Bell, C. (1977) : 'Alternative Theories of Sharecropping : Some Tests Using Evidence from North-East India'; *Journal of Development Studies* 13: 317-46
28. Bell, C. (1988) : 'Credit Markets and Interlinked Transactions', in H.B. Chenery and T.N. Srinivasan (eds.), *Handbook of Development Economics*, Amsterdam, North-Holland
29. Bell, C. and Braverman, A. (1981) : 'On the Nonexistence of "Marshallian" Sharecropping Contracts'; *Indian Economic Review* 15 : 201-3
30. Bell, C. and Zusman, P. (1976) : 'A Bargaining Theoretic Approach to Cropsharing Contracts'; *American Economic Review* 66 : 578-88
31. Bell, C. and Srinivasan, T.N. (1989) : 'Some Aspects of Linked Product and Credit Market Contracts among Risk-Neutral Agents', in Pranab Bardhan (ed.) *The Economic Theory of Agrarian Institutions*, Oxford University Press : Oxford
32. Bhaduri, A. (1973) : 'A Study in Agricultural Backwardness under Semi-feudalism'; *Economic Journal* 83: 120-137
33. Bhaduri, A.(1977) : 'On the Formation of Usurious Interest Rates in Backward Agriculture';*Cambridge Journal of Economics* 1 : 341-52
34. Bhaduri, A. (1980 a ) : 'Agricultural Backwardness Under Semi-feudalism : A Rejoinder'; *Economic Journal* 89 : 420-21
35. Bhaduri, A.(1980 b) : 'A Reply to Rao and Ghose'; *Cambridge Journal of Economics* 4(2) : 173-74
36. Bhaduri, A. (1982) : 'The Role of Rural Credit in Agrarian Reform with special reference to India'; *Economic Bulletin for Asia and the Pacific* 3(2) : L 104-11
37. Bhaduri, A. (1976) : 'New Relations in Production in Haryana Agriculture'; *Economic and Political Weekly* 27 : A23-30
38. Bharadwaj, K. (1979) : 'Towards a Macro Framework for a Developing Economy : The Indian Case'; *The Manchester School of Economic and Social Studies* 47(3) : 270-302
39. Bharadwaj, K.and Das P.K. (1975) : 'Tenurial Conditions and Mode of Exploitation : A Study of Some Villages in Orissa'; *Economic and Political Weekly* 10 (Annual Number) : 221-40
40. Bhende, M.J. (1986) : 'Credit Markets in Rural South India'; *Economic and Political Weekly* 21(38/39) : A 119-24
41. Binswanger, H.P. and Sillers, D.A. (1983) : 'Risk Aversion and Credit Constraints in Farmers' Decision-making: A Reinterpretation'; *The Journal of Development Studies* 29 (2) : 5-21
42. Binswanger, H.P.(1986) : 'Behavioural and Material Determinants of Production Relation in Agriculture'; *Journal of Development Studies* 22(3) : 503-39
43. Borooah, V. (1980) : 'High Interest Rates in Backward Communities : An Examination of the Default Hypothesis'; *Journal of Development Studies* 22(3) : 503-39
44. Bottomley, A. (1963) : 'The Premium for Risk as a Determinant of Interest Rate in Underdeveloped Rural Areas'; *Quarterly Journal of Economics* 72(4)
45. Bottomley, A. (1975) : 'Interest Rates Determination in Underdeveloped Rural Areas'; *American Journal of Agricultural Economics* 57(2) : 279-91

46. Bottomley, A. and Nudds, D. (1969) : 'A Window's Curse Theory of Capital Supply in Underdeveloped Rural Areas'; *The Manchester School of Economics and Social Studies* 37(3) : 131-40
47. Braverman, A and Guasch, J.L. (1984) : 'Capital Requirements, Screening and Interlinked Share-cropping and Credit Contracts'; *Journal of Development Economics* 14(3) : 359-74
48. Braverman, A and Guasch, J.L. (1986) : 'Rural Credit Markets and Institutions in Developing Countries : Lessons for Policy Analysis from Practice and Modern Theory'; *World Development* 14(10) : 1253-67
49. Braverman, A and Guasch, J.L. (1988) : 'Institutional Aspects of Credit Cooperatives', *Working papers : Agricultural policy*, (Washington : Agriculture and Rural Development Department, The World Bank)
50. Braverman, A and Guasch, J.L. (1989) : 'Institutional Analysis of Credit Co-operatives', in Pranab Bardhan(ed.) *The Economic Theory of Agrarian Institution*. Oxford University Press : Oxford
51. Braverman, A and Stiglitz, J.E. (1982) : 'Sharecropping and the Interlinking of Agrarian Markets'; *American Economic Review* 72(4) : 695-755
52. Braverman, A and Stiglitz, J.E. (1986 a) : 'Cost-Sharing Arrangements under Sharecropping : Moral Hazard, Incentive Flexibility, and Risk'; *American Journal of Agricultural Economics* 68 : 642-52
53. Braverman, A and Stiglitz, J.E. (1986 b) : 'Landlords, Tenants and Technological Innovations'; *Journal of Development Economics* 23 : 313-32
54. Braverman, A and Srinivasan, T.N (1981) : 'Credit and Sharecropping in Agrarian Societies'; *Journal of Development Economics* 9:289-312
55. Braverman, A and Srinivasan, T.N (1980) : 'Agrarian Reform in Developing Rural Economies Characterised by Interlinked Credit and Tenancy Markets'; *World Bank Staff Working Paper*, No. 433, October
56. Brown, D. and Atkinson, J.(1981) : 'Cash and Share Renting : An Empirical Test of the Link Between Entrepreneurial Ability and Contractual Choice'; *Bell Journal of Economics* 12: 296-99
57. Carter, M.R. (1987) : 'Equilibrium Credit Rationing of Small Farm Agriculture'; *Journal of Development Economics* 28 : 83-103
58. Cheung, S.N.S. (1968) : 'Private Property Rights and Sharecropping'; *Journal of Political Economy* 76 : 10722
59. Cheung, S.N.S. (1969 b) : 'Transaction Costs, Risk Aversion and the Choice of Contractual Arrangements'; *Journal of Law and Economics* 12 : 23-43
60. Dadhich, C.L. (1971) : 'Wilful Default of Cooperative Credit in Rajasthan : Some Issues'; *Indian Journal of Agricultural Economics* 26(4)
61. Drez, J. and Mukherjee, A. (1987) : 'Labour Contracts in Rural India : Theories and Evidence'; DEP/7, *London School of Economics*
62. Desai, B.M. (1987) : 'Credit : Summaries of Group Discussion'; *Indian Journal of Agricultural Economics* 42(1) : 29-31
63. Dreze, J. and Mukherjee, A. (1987) : 'Labour Contracts in Rural India : Theories and Evidence'; DEP/7, *London School of Economics*
64. Egger, P. (1986) : 'Banking for the Rural Poor :Lessons from some Innovative Saving and Credit Scheme'; *International Labour Review* 125(4) : 447-62
65. Eswaran, M. and Kotwal, A. (1985 a) : 'A Theory of Two-tired Labour Markets in Agrarian Economies'; *American Economic Review* 75 : 165-77
66. Eswaran, M.and Kotwal, A. (1985 b) : 'A Theory of Contractual Structure in Agriculture'; *American Economic Review* 75 : 352-67
67. Eswaran, M.and Kotwal, A. (1986) : 'Access to Capital and Agrarian Production Organisation'; *The Economic Journal* 96(382) : 482-98

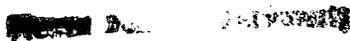
68. Eswaran, M. and Kotwal, A. (1989) : 'Credit and Agrarian Class Structure', in Pranab Bardhan (ed.) *The Economic Theory of Agrarian Institutions*, Oxford : Oxford University Press
69. Frank, A.G. (1990) : 'On 'Feudal' Modes, Models and Methods of Escaping Capitalist Reality', in Utsa Patnaik (ed.) *Agrarian Relations and Accumulation*, Oxford University Press
70. Gangopadhyay, S. and K. Sengupta (1987 a) : 'Unsure and Collateral Pricing : Towards an Alternative Explanation'; *Cambridge Journal of Economics* 11(1) : 47-56
71. Gangopadhyay, S. and K. Sengupta (1987 b) : 'Small Farmers, Moneylenders, and Trading Activity'; *Oxford Economic Papers* 39 : 333-42
72. Ghatak, S. (1975) : 'Rural Interest Rates in the Indian Economy'; *Journal of Development Studies* 11(3) : 190-201
73. Ghatak, S. (1977) : 'Rural Credit and the Cost of Borrowing : Interstate Variations in India'; *Journal of Developing Areas* 18(1) 21-34
74. Ghose, A.K. and Saith, A. (1976) : 'Indebtedness, Tenancy and the Adoption of New Technology in Semi-Feudal Agriculture'; *World Development* 4(4) : 21-34
75. Georgescu-Roegen, N. (1960) : 'Economic Theory and Agrarian Economics'; *Oxford Economic Papers* 12 : 1-40
76. Gonzalez Vega, C. (1977) : 'Interest Rate Restrictions and Income Distribution'; *American Journal of Agricultural Economics* 59: 973-76
77. Greenwald, B. and Stiglitz, J.E. (1986) 'Externalities in Economics with Imperfect Information and Incomplete Markets'; *Quarterly Journal of Economics* 101 : 229-64
78. Guha, A. (1986) : 'The Less Developed Economy in Fantasy and Myth : A Review Article'; *Indian Economic Review* 21 : 61-69
79. Gupta, M.R. (1987) : 'A Nutrition-based Theory of Interlinkage'; *Journal of Quantitative Economics* 3 : 189-202
80. Hallagan, W. (1978) : 'Self-selection by Contractual Choice and the Theory and Share-Cropping'; *Bell Journal of Economics* 9 : 344-54
81. Hart, G. (1986) : 'Interlocking Transactions : Obstacles, Precursors Instruments of Agrarian Capitalism'; *Journal of Development Economics* 23 : 177-203
82. Iqbal, F. (1983) : 'The Demand for Funds by Agricultural Households : Evidence from Rural India'; *The Journal of Development Studies* 20: 68-86
83. Iqbal, F. (1988) : 'The Determinants of Moneylender Interest Rates : Evidence from Rural India'; *The Journal of Development Studies* 24(3) : 364-78
84. Issawi, C. (1957) : 'Farm Output under Fixed Rents and Share Tenancy'; *Land Economics* 38: 74-77
85. Jaffe, D. and Russell, T. (1976) : 'Imperfect Information, Uncertainty, and Credit Rationing'; *Quarterly Journal of Economics* 90 : 651-66
86. James, V.E. (1982) : 'Credit Rationing, Rural Savings and Financing policy in Developing Countries'; *Asian Development Bank Staff Working Paper* No.13, September, Manila
87. Jaynes, D.G. (1982) : 'Production and Distribution in Agrarian Economics'; *Oxford Economic Papers* 34 : 346-67
88. Kotwal, A. (1985) : 'The Role of Consumption Credit in Agricultural Tenancy'; *Journal of Development Economics* 18 : 273-95
89. Kurup, T.V.N. (1976) : 'Price of Rural Credit : An Empirical Analysis of Kerala'; *Economic and Political Weekly*, 11, 3 July 1976

90. Ladejinsky, W.(1977) : 'Agrarian Reform in India'; in L.Y. Walinsky (ed.) *The Selected Papers of Wolf Ladejinsky : Agrarian Reform as Unfinished Business*, New York : Oxford University Press
91. Ladman, J.R. and Adams, D.W. (1978) : 'The Rural Poor and Recent Performance of Formal Rural Financial Markets in the Dominican Republic'; *Canadian Journal of Agricultural Economics* 26(1): 43-50
92. Ladman, J.R. and Tinnermeier, R.L. (1981) : 'The Political Economy of Agricultural Credit : The Case of Bolivia'; *American Journal of Agricultural Economics* 63(1) 66-72
93. Lele, U. (1981) : 'Cooperatives and the Poor : A Comparative perspective'; *World Development* 9(1): 55-72
94. Lipton, M.(1976) : 'Agricultural Finance and Rural Credit in Poor Countries'; *World Development* 4(7) : 543-53
95. Lucas, R.E.B. (1979) : 'Sharing, Monitoring, and Incentives : Marshallian Misallocation Reassessed'; *Journal of Political Economy* 87 : 501-20
96. Mitra, P.K (1983) : 'A Theory of Interlinked Rural Transactions'; *Journal of Public Economics* 20 : 167-92
97. Mukherji, B. (1982) : 'Usurious Interest Rates and Price of Collateral : A Note'; *Indian Economic Review* 17 : 49-61
98. Mintz, S.W. (1959) : 'Internal Market Systems as Mechanism of Social Articulation'; *Proceedings of the 1959 Annual Spring Meetings of the American Ethnological Society*, University of Washington Press, Seath
99. Mitra, P.K. (1983) : 'A Theory of Interlinked Rural Transactions'; *Journal of Public Economics* 20 : 167-92
100. Newbery, D.M.G. (1974) : 'Cropsharing Tenancy in Agriculture : Comment'; *American Economic Review* 64 : 1060-66
101. Newbery, D.M.G. (1975) : 'Tenurial Obstacles to Innovation'; *Journal of Development Studies* 2(4) : 263-77
102. Pant, C. (1980) : 'Exploitation and Interrelated Tenancy and Credit Transactions'; *Indian Economic Review* 15(4) : 243-53
103. Patnaik, Utsa (1976) : 'Class Differentiation within the Peasantry'; *Economic and Political Weekly* 11 : A 82-101
104. Patnaik, Utsa (1990) : 'Capitalist Development in Agriculture : Note', in Utsa Patnaik (ed.) *Agrarian Relations and Accumulation*; Oxford University Press
105. Prasad, P. (1974) : 'Reactionary Role of Usurers' Capital in Rural India'; *Economic and Political Weekly* 9 : 1305-8
106. Putterman, L (1989) : 'Agricultural Producer Co-operative'; in Pranab Bardhan (ed.) *The Economic Theory of Agrarian Institution*, Oxford University Press : Oxford
107. Rao, C.H.H. (1970) : 'Farm Size and Credit Policy'; *Economic and Political Weekly* 5(52) : 157-62
108. Rao, J.M. (1980) : 'Interest Rates in Backward Agriculture'; *Cambridge Journal of Economics* 4(2) : 159-67
109. Rudra, A. (1975) : 'Sharecropping Arrangements in West Bengal'; *Economic and Political Weekly* 10 : A58-63
110. Rattan, V.W. (1986) : 'Assistance to Expand Agricultural Production'; *World Development* 14(1) : 39-63

111. Sen, Abhijit (1981) : 'Market Failure and Control of Labour Power : Towards an Explanation of "Structure" and Change in Indian Agriculture'; *Cambridge Journal of Economics* 5: 201-28 / 327-50.
112. Sen, A.K. (1966) : 'Labour Allocation in a Cooperative Enterprise'; *Review of Economic Studies* 33 : 361-71
113. Srinivasan, T.N. (1980) : 'Bonded Labour Contracts and Incentives to Adopt Yield-raising Innovation in "Semifeudal" Agriculture'; *Indian Economic Review* 14 : 165-69
114. Stiglitz, J.E. (1974) : 'Incentives and Risk-sharing in Sharecropping'; *Review of Economic Studies* 41: 219-55
115. Stiglitz, J.E. (1985) : 'Information in Economic Analysis : A Perspective'; *Economic Journal Supplement* 95: 21-40
116. Stiglitz, J.E.(1989) : 'Rational Peasants Efficient Institutions, and a Theory of Rural Organisation : Methodological Remarks for Development Economics, in Pranab Bardhan (ed.) *The Economic Theory of Agrarian Institutions*, Oxford University Press : Oxford
117. Stiglitz, J.E. and Weiss, A. (1981) : 'Credit Rationing in Markets with Imperfect Information'; *American Economic Review* 71(3) : 393-410
118. Swindell, K. (1978) : 'Family Farms and Migrant Labor : The Stranger Farmers of the Gambia'; *Canadian Journal of African Studies* 12: 3-17
119. Talib, B.D. (1990) : 'Big Farmers of Punjab', in Utsa Patnaik (ed.) *Agrarian Relations and Accumulation* Oxford University Press
120. Timberg, T.A. and Aiyar, C.V. (1984) : 'Informal Credit Markets in India'; *Economic Development and Cultural Change* 33(1) : 43-59
121. Tun Wai, U. (1958) : 'Interest Rates Outside the Organised Money Markets of Underdeveloped Countries'; *IMF Staff Papers* 6 : 80-142
122. Vitalians, P. (1983) : 'Cooperative Enterprise : An Alternative Conceptual Basis for Analysing a Complex Institution'; *American Journal of Agricultural Economics* 65 : 1078-83
123. Wharton, C. (1962) : 'Marketing, Merchandising and Moneylending : A Note on Middleman Monopsony in Malaya'; *Malaya Economic Review* 7(1) : 24-44
124. Yudelman, M. (1976) : 'Agricultural Finance and Rural Credit in poor Countries : Comments'; *World Development* 4(7) : 555-56
125. Zusman, P. (1989) : 'Peasants' Risk Aversion and the Choice of Marketing Intermediaries and Contracts: A Bargaining Theory of Equilibrium Marketing Contracts', in Pranab Bardhan (ed.) *The Economic Theory of Agrarian Institution* Oxford University Press : Oxford

### **Government Reports**

1. *Annual Plan on Agriculture : Cooch Behar 1986-87/1990-91*; Principal Agricultural Office, Cooch Behar
2. *Draft District Plan : Cooch Behar (1994-95)*; Office of the District Magistrate, Cooch Behar
3. *Economic Review 1986-87/1988-89/1989-90/1990-91*; Government of West Bengal
4. *District Statistical Handbook, Cooch Behar, Series 1981, 1986-89*; Bureau of Applied Economics and Statics
5. *Key Statistics of the District of Cooch Behar, 1983/1987/1995*; District Statistical Office
6. *District Census Handbook (1981)*; Cooch Behar District
7. *Statistical Abstract, West Bengal, 1978-89 (Combined)*; Government of West Bengal, Bureau of Applied Economics and Statistics

  
 Library  
 Raja Ram Mohan Roy