

## CHAPTER IV

### INTERLINKAGES OF INFORMAL CREDIT

The rural class structure as observed earlier, is by and large dualistic in nature, having well endowed sections such as landlords, large farmers, agricultural money lenders, input traders etc. on the one hand, and the less endowed sections like agricultural labourers, annual farm servants (AFS), migrant labour, tenants and small farmers etc. on the other. Generally, when the total income from all the sources including the wage income of the less endowed sections is not sufficient to meet their consumption and crop production purposes, they have to depend on credit to bridge the gap. Further, there is need for them to get employment for their family labour so as to increase their total income. This warrants them to go for labour contracts (AFS and migration), tenancy contracts and credit contracts.

At the same time, the rich endowed sections with whom the land and work is generally concentrated, require to enter into various labour, tenancy, trade and credit, contracts. Both the poor endowed and well endowed sections have to identify right type of parties to enter into the 'contracts' required by them.

In view of the above situation, a type of interlinking of different transactions may arise so as to satisfy the wants requirements of both the parties involved. These interlocked transactions may encompass various markets such as land, labour, input and output markets; generally credit being the central to those transactions. Therefore, under an interlinked transaction, two parties transact the business in

more than one market simultaneously, so that the transactions in one market influence the terms of the transaction in the other market.

Now the two important questions that arise are whether there are inter-regional differences in the incidence and extent of these linkages? and whether these interlinkages are confined to a particular sections of rural society?

Some of the evidences in literature suggest that the extent of interlinkages are higher in commercialised areas (Bell and Srinivasan 1989) and irrigated regions (Sarap 1991), while there are evidences to the contrary also showing that the extent of interlinkages are even higher in backward village also (Ruddy 1992). Regarding the incidence of these linkages among the size groups, Sarap (1991) observed that interlinked credit transactions are essentially a phenomenon confined to landless labourers, marginal and small farmers. However, Boll and Srinivasan (1989) observed higher extent of inter-linked transaction among owner cultivators than that of other typos of households in Punjab and Andhra Pradesh, while they found more inter-linked transactions in labour households in Bihar.

In view of the above, it is attempted to examine the extent of interlinkages in study area which is discussed in Section I and analysed the characteristics of the interlinkages in Section II. In Section III we briefly described various types of interlinkages in the study area. While in Section IV, the pattern of linked and non-linked credit distributed by various informal lenders to different

purposes is discussed. Finally in Section V, the broad conclusions emerged are presented.

## Section I

### Extent of interlinkagos in selected villages

The proportion of households having any one of the informal credit transactions linked with any of the factor or product markets (herein after called as linked households) is the highest in commercialised village (69.86 per cent) followed by backward village (61.25 per cent). The proportion of nonlinked households (includes the households which have informal credit transactions but not linked with other markets and the households having no informal credit transactions) is highest in the developed village (Table 4.1 columns 3 and 4). The same pattern is observed in case of the extent of linked credit transactions<sup>1</sup> also among the three villages. However, the differences between the villages are not of very high order. The distribution of sample households in the selected villages is furnished in Table 4.2.

It can be seen from Table 4.3 (column 9) that the proportion of linked households out of total informal loanee households is highest in commercialised village (.91.07 per cent) followed by backward village (76.56 per cent) and

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1. It may be noted that, interlinked household is different from interlinked transaction. Interlinked household defined for the purpose of our study as the one which has encountered at least one interlinked transaction out of all his economic transactions during a period. The term "linked" is synonymously used for "interlinked." in the study.

**Table 4.1**

**Extent Interlinkages among Agricultural Labourers and Cultivators in Selected Villages**

Village/AL and cultivators	Share of the group out of total No. of linked informal credit transactions in the village	Share of the group out of total amount of linked informal credit in the village	Proportion of linked transactions		Share of the group out of total linked HHs in the village (%)	No. of linked informal credit transactions in the village	Share of the group out of total amount of linked informal credit in the village	Average No. of transactions per household	
			Proportion of linked HHs in the group (%)	out of total informal credit transactions in the group (%)				Linked	Non-linked
1	2	3	4	5	6	7	8	9	
<b>Developed Village</b>									
1. Agricultural labourers	39.61	50.00	63.64	35.71	35.90	42.72	1.40	0.80	
2. Cultivators	60.39	59.02	58.82	64.29	64.10	57.28	1.39	1.40	
3. All households	100.00	55.45	60.47	100.00	100.00	100.00	1.39	1.13	
<b>Commercialised Village</b>									
1. Agricultural labourers	49.31	61.11	78.95	43.14	47.62	35.28	1.36	0.57	
2. Cultivators	50.69	78.23	84.62	56.86	52.38	64.72	1.14	0.75	
3. All households	100.00	69.86	81.82	100.00	100.00	100.0(1)	1.24	0.64	
<b>Backward Village</b>									
1. Agricultural labourers	43.75	62.86	71.15	44.90	50.68	45.77	1.68	1.15	
2. Cultivators	56.25	60.00	59.02	55.10	49.32	54.23	1.33	1.39	
3. All households	100.00	61.25	64.60	100.00	100.00	100.00	1.49	1.29	

**Source: Field data.**

**Table. 4.2**  
**Distribution of Sample Households in Selected Villages**

	No. of households borrowing							HHs with no loan	Total sampl le HHs
	Only informal loan			Only Farmal loan	Both formal and informal loan				
	Linked	Non-linked	Total		Linked	Non-linked	Total		
Developed village									
I. AGRL LABOURERS	19	5	24	2	1	2	3	11	40
a. Landless AL	8	3	11	-	-	1	1	6	18
b. Landed AL	11	2	13	2	1	1	2	3	22
II. CULTIVATORS	19	12	31	9	17	2	19	2	61
a. Small farmers	10	8	18	3	11		11	1	33
b. Medium farmers	7	4	11	2	4	2	6	1	20
c. Large farmers	2	-	2	4	2	-	2	-	8
III. ALL FARM HOUSEHOLDS	38	17	33	11	18	4	22	13	101
Commercialised village									
I. AGRL LABOURERS	19	2	21	3	3	1	4	8	36
a. Landless AL	9	-	9	2	-	-	--	2	13
b. Landed AL	10	2	12	1	3	1	4	6	23
II. CULTIVATORS	18	1	19	2	11	1	12	4	37
a. Small farmers	7	-	7	1	5	1	6	3	17
b. Medium farmers	6	1	7	1	1	-	1	1	10
c. Large farmers	5	-	5	-	3	-	5	-	10
III. ALL FARM HOUSEHOLDS	37	3	40	5	14	2	16	12	73
Backward village									
I. AGRL LABOURERS	18	4	22	-	4	1	5	8	35
a. Landless AL	3	-	3	-	1	-	1	5	9
b. Landed AL	15	4	19	-	3	1	4	3	26
II. CULTIVATORS	18	8	26	5	9	2	11	3	45
a. Stall farmers	9	7	16	1	3	-	3	3	23
b. Medium farmers	7	1	8	1	3	2	5	-	14
c. Large farmers	2	-	2	3	3..	-	3	-	8
III. ALL FARH HOUSEHOLDS	36	12	48	5	13	3	16	11	80

Source: Field data.

developed village (72.73 per cent). Similar pattern is observed with regard to the proportion of linked credit amount out of total informal credit amount also among the three villages (Table 4.4). Therefore it can be inferred that almost all of the informal credit transactions are interlinked in commercialised village, while in the other two villages, there are considerable number (about 25 to 30 per cent) of non-linked informal credit transactions. Though the above data broadly shows that the extent of interlinkages are higher in the commercialised village, it should be noted here that most of the large and medium farmers among cultivators in commercialised village are chronic defaulters of formal credit. The lack of formal credit to the medium and large cultivators besides the prevalence of higher association of credit with commission agents through groundnut crop may be the reasons for higher interlinkages of informal credit in the commercialised village. If we take the remaining two villages, the extent of linked households and linked transactions are higher in backward village than that of developed village,

#### **Extent of inter linkages among occupation groups**

Among the two occupation groups (i.e., agricultural labourers and cultivators), the proportion of linked households is higher in cultivators than that of agricultural labourers category in commercialised and developed villages, while it is vice-versa in the backward village. However, the proportion of linked credit transactions out of total Informal credit transactions is higher in case of agricultural labourers than that of cultivators in the selected village except in commercialised village (Table 4.1

**Table 4.3**

**Extent of Interlinkages among Broad Categories of Sample Households during 1991-92**

Size group	Distri- bution of HHs	Proportion out of total HHs in the group		Proportion of linked HHs getting formal loan	Proportion of nonlinked HHs getting formal loan	Proportion loan to informal loan to total loan (formal & informal)		Proportion of linked HHs out of in- formal loanee HHs	
		Linked	Nonlinked			Linked	Nonlinked		
		HHs	HHs			HHs	HHs		
		1	2			3	4		5
<u>Developed Village</u>									
Landless AL	17.83	44.44	55.56	-	10.00	100.00	90.38	66.67	
Landed AL	21.78	54.55	45.45	8.33	30.00	98.60	53.76	80.00	
Small Farmers	32.67	63.64	36.36	52.38	25.00	73.88	67.09	72.41	
Medium Farmers	19.80	55.00	45.00	36.36	44.44	66.94	65.73	64.71	
Large Farmers	7.92	50.00	50.00	50.00	100.00	48.48	-	100.00	
Total	100.00	55.45	44.55	32.14	33.33	77.93	48.23	72.73	
<u>Commercialised Village</u>									
Landless AL	17.80	69.23	30.77	-	50.00	100.00	-	100.00	
Landed AL	31.51	56.52	43.48	23.07	20.00	87.29	88.68	81.25	
Stall Farmers	23.29	70.59	29.41	41.67	40.00	63.23	42.55	92.31	
Medium Farmers	13.70	70.00	30.00	14.29	33.33	59.68	-50.00	87.50	
Large Farmers	13.70	100.00	-	50.00	-	85.75	-	100.00	
Total	100.00	69.86	30.14	27.45	31.82	79.16	62.34	91.07	
<u>Backward Village</u>									
Landless AL	11.25	44.44	55.56	25.00	-	100.00	-	100.00	
Landed AL	32.50	69.23	30.77	16.66	12.50	93.04	89.65	78.26	
Stall Farmers	28.75	52.17	47.83	25.00	9.09	90.74	78.90	63.16	
Medium Farmers	17.50	71.43	28.57	30.00	75.00	88.67	49.61	76.92	
Large Farmers	10.00	62.50	37.50	60.00	100.00	73.24	-	100.00	
Total	100.00	61.25	38.75	26.53	25.81	88.60	35.20	76.56	

Source: Field data

**Table 4.4****Proportion of Linked and Nonlinked Credit Transactions among Agricultural Labourers and Cultivators across Broad Size Categories**

Village/Size Classes	Linked credit		Nonlinked credit		All informal credit	
	No.	Amount	No.	Amount	No.	Amount
Developed Village						
1. Agrl. labourers without any operated land (AL) (landless)	68.75	50.00	31.25	50.00	100.00	100.00
2. Landed agricultural labourers	60.71	72.60	39.29	27.40	100.00	100.00
a) All agricultural labourers	63.64	66.52	36.36	33.48	100.00	100.00
3. Small and marginal farmers	55.77	48.28	44.23	51.72	100.00	100.00
4. Medium and large farmers	63.64	57.34	36.36	42.66	100.00	100.00
a) All cultivators	58.82	53.12	41.18	46.88	100.00	100.00
b) All households	60.47	58.12	39.53	41.88	100.00	100.00
Commercialised Village						
1. Agrl. labourers without any operated land (AL) (landless)	84.62	86.30	15.38	13.70	100.00	100.00
2. Landed agricultural labourers	76.00	72.22	24.00	27.78	100.00	100.00
a) All agricultural labourers	78.95	77.08	21.05	22.92	100.00	100.00
3. Small and marginal farmers	88.89	82.45	11.11	17.55	100.00	100.00
4. Medium and large farmers	80.95	87.30	19.05	12.70	100.00	100.00
a) All cultivators	84.62	86.30	15.38	13.70	100.00	100.00
b) All households	81.82	82.80	18.18	17.20	100.00	100.00
Backward Villagi						
1. Agrl. labourers without any operated land (AL) (landless)	57.14	34.09	42.66	65.91	100.00	100.00
2. Landed agricultural labourers	73.33	76.57	26.67	23.43	100.00	100.00
a) All agricultural labourers	71.15	72.46	28.85	27.54	100.00	100.00
3. Small and marginal farmers	56.67	41.62	43.33	58.38	100.00	100.00
4. Medium and large farmers	61.29	57.88	38.71	42.12	100.00	100.00
a) All cultivators	59.02	51.65	40.98	48.35	100.00	100.00
b) All households	64.60	59.47	35.40	40.53	100.00	100.00

Note: 1. No. denotes number of informal credit transactions.

Source: Field data

columns 3 and 4). If we compare the shares of the two occupational groups out of total linked households, total informal linked transactions and also the total informal credit amount involved in linked transactions, the shares of agricultural labourers are lower than that of cultivators in all the villages (columns 5, 6 and 7 of Table 4.1). Further the shares of cultivators are higher than their proportion in the total households in each village except in backward village. On the other hand, shares of agricultural labourers are lower than their proportion out of the total households in each village except in backward village. Further, if we observe the average number of all informal credit transactions per linked household, they are higher for agricultural labourers than that of cultivators in all the villages, while the number of credit transactions per nonlinked household are higher for cultivators than that of agricultural labourers (columns 8 and 9 of Table 4.1). However, these differences are only marginal.

#### **Extant of Interlinkages among the size groups**

Among the size groups within agricultural, labourers, the extent of linked households are higher among landed agricultural labourers than that of landless agricultural labourers except in commercialised village. In the similar way, among the cultivators, the proportion of linked households is higher among medium and large farmers than that of small farmers except in developed village (Table 4.2 column 3). However, with regards to proportion of linked credit transactions among size groups of agricultural labourers, they are higher in case of landless agricultural

labourers than landed agricultural labourers except in backward village which is in vice-versa (Table 4.4). On the other hand, among the size groups of cultivators, the extent of linked credit transactions are lower among small farmers than that of medium and large farmers (put together) except in commercialised village (Table 4.4). The foregoing analysis reveals an interesting observation that there is, by and large, a positive association between extent of linkages and operating farm size, while some of the researchers felt the interlinkages largely as a phenomenon of less endowed sections (Sarap, 1991). It may also be noted that all the informal loan borrowers in large farmers category are linked in all the three villages, while it is not so even in case of landless agricultural labourers category also, though all of them are linked in commercialised and backward villages, only two-thirds of them are linked in developed village (Table-4.3 column 9). But here, the nature of linkages may be important.<sup>2</sup>

It can be further seen (Table-4.3 columns 5 and 6) that the chances of getting formal credit are lower for linked households compared to that of nonlinked households, since the proportion of households getting formal credit is higher in case of nonlinked households than that of linked households in all the three villages except in backward village at the aggregate level, though not the differences are significant. Further, the data shows that the dependency on informal credit is higher among the linked households than

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2. The qualitative differences if any in the nature of linkages involved with agricultural labourers and large farmers are discussed in subsequent chapters.

that of nonlinked households irrespective of farm size (columns 7 and 8 of Table 4.3). The fact that no linked household of landless agricultural labourer category getting formal credit in two of the villages and the informal credit constituting 100 per cent of total credit to them in all villages can be interpreted as the landless agricultural labourer households' have no alternative but the linked informal credit.

The foregoing analysis, though reveals the inter-village differences and the differences in the extent of linkages between occupation groups and among size groups, the evidences are inconclusive. Therefore, to probe the issue further, a binary logit model is used and presented 'below.

### **Binary Logit model for interlinkages**

We have classified informal credit transactions into interlinked ones and otherwise, in order to determine the factors which influence the probability of an informal loan being interlinked. Dependent variable is 1, if an informal credit transaction is interlinked and '0' otherwise. The explanatory variables included in the analysis are as follows:

- |                      |   |
|----------------------|---|
| i) Occupation group: | 1, if the household borrowed the informal loan is a cultivator and '0' otherwise. |
| ii) Source of loan1  | 1, if the lender is a trader-lender and 0, if the lender is a farmer lender.      |
| iii) Source of loan2 | 1, if the lender is other lender and 0 if the lender is a farmer lender.          |
| iv) Village1         | 1, if the loan is transacted in the commercialised village, 0 otherwise,          |
| v) Village2          | 1, if the loan is in developed village and *0' otherwise.                         |

We expected a positive sign for commercialised village (village1) and developed village (village2). In case of cultivators, (occupation group!), a negative sign is expected, since the extent of inter linkages are higher in agricultural labourers except in commercialised village. Besides village and occupation group, we have included source of loan also in the model, since type of lenders also have an influence on the incidence of linkage. We expect a positive sign for the variable trader lender (source of loan.1) and a negative sign for other lenders (source of loan 2).

The results of the Binary Logit model are shown in Table 4.5. The signs of all the coefficients are as expected. The relationships of coefficients of variables - commercialised village (village 1), cultivators (occupation class) and other lenders (source of loan 2) - are statistically significant. The results reveal that the occurrence of linked transactions among informal credit transactions is higher in commercialised village. The probability of a transaction being linked is higher for agricultural labour households. Further it infers that the probability of a transaction being linked is higher if the loan is advanced by farmer lender and trader lender compared to that of other lender and it does not differ between farmer lender and trader lender.

Based on the above results and earlier analysis, we can conclude that the frequency of interlinkages are higher in commercialised village than that of other two villages. By and large, the occurrence of interlinkages are higher in agricultural labourers than cultivators.

**Table 4.5**  
**Maximum likelihood estimation of Dichotomous Logit Relationship**  
**(Dummy dependent variable 1, if the informal credit transaction is**  
**a linked one and '0' otherwise)**

Explanatory Variable		Coefficient	T Ratio
1. Village 1 - commercialised village	1, if the loan pertains to commercialised village and '0' if it is in backward village	0.8931***	1.698
2. Village 2- developed village	1, if the loan is developed village and '0' if it is in backward village.	0.5492	1.2582
3. Occupation class	1, if the loan is availed by a cultivator and '0' if it is by an agricultural labourer.	-0.8583**	-2.2506
4. Source of loan 1 trader-lenders	1, if the loan is lent by a trader lender and '0' if it is by a farmer lender.	27.887	0.0004
5. Source of loan 2 other-lender	1, if the loan is lent by other lender and '0' if it is by a farmer-lender.	-2.1697*	-3.3698
Constant:		-0.3520	-
Log-Likelihood function:		-84.268	
No. of observations:		210	
Degrees of freedom:		5	
Percentage of right predictions :		77.62*	

\*: Significant at 1% level

\*\* : Significant at 5% level

\*\*\*: Significant at 10% level.

## Section II

### **Characteristics of Linked Households**

Now, the question that arises is why the interlinkages are predominant in the study area. Hitherto, it was felt that only the poor and less endowed sections of rural society are being drawn into interlinkages by the stronger parties for a variety of reasons. But the interesting observation we have made here in the above analysis is that the large cultivators are also involved in the interlinkages. Whether there are any specific characteristics of these linked households in agricultural labourers and cultivators that differentiate with that of non-linked households in the same occupation group? In this section, we attempt to identify the specific characteristics by which they got involved in interlinked transactions. The analysis is made separately for agricultural labourer and cultivator households.

### **Household characteristics of agricultural labourers**

1. Caste: Caste plays an important role in the access of credit. Generally the scheduled caste/scheduled tribe households have more vulnerabilities in getting the benefits of formal credit. Even with regards to informal credit also, they face hardships in getting its access, since they can not provide tangible collaterals due to their poor resource endowment position. Hence they may have to enter into linkages for their credit requirements. Thus the probability of linkage may be higher in SC/ST households than that of other caste groups.

2- Education: Education of the head of household who is the decision maker of various production/employment related and credit related activities has an important role to play. Formal literacy to the head of the household significantly improves his understanding of different economic opportunities available to him. It may help in approaching the formal credit agencies which are urban oriented, since illiterates may have generally inhibitions to approach them. An educated person can also assess the advantages and disadvantages of a transaction better than an illiterate. Therefore, the possibility of a literate household going for interlinked transaction will be less, if that transaction is disadvantageous.

3. Dependent-worker ratio; It denotes the ratio of dependents to the number of workers in the household.

No. of dependents in an household

Dependent-worker ratio =  $\frac{\text{No. of dependents in an household}}{\text{No. of workers in the household}}$

No. of workers in the household

The higher ratio implies more pressure on workers' employment and income earned by them. It becomes necessary for the workers in the household to be employed continuously to feed the entire household. Thus there is higher probability of choosing the employment opportunities of disadvantaged nature also to avoid the risk of unemployment and income. Therefore the possibility of an household involved in linked transaction are higher, if its dependent worker ratio is higher.

4. Ratio of owned Land per worker: If this ratio of an agricultural labourer household is lower, the pressure on land will be more and the workers in the household have to

search for alternate employment opportunities. Therefore it can be expected that the probability of an household entering into interlinkages may be lower, if this ratio is higher. 5- Per Capita wage income: If the wage income of an household is higher, there is no necessity of choosing adverse employment opportunities like migration, annual farm servant (AFS) system etc. Therefore possibilities of an household being interlinked may be lower, if the per capita wage income is higher.

<sup>6</sup>- Per capita non-land asset value: Better asset endowment position of an household gives an opportunity of choosing better alternatives of credit by offering tangible securities. Thus the probability of interlinkage may be lower, if the household is having higher per capita non-land asset value.

The characteristics identified above are tabulated in Table 4.6.

Among the agricultural labourer households the linked households are having higher dependent-worker ratio than that of non-linked households in all the three sample villages. The proportion of households having illiterate heads are also observed to be higher in linked households than that of non-linked households. Further the proportion of SC/ST households are higher among linked households. However, the resource endowment features such as average owned area per worker and per capita nonland asset value are in general lower for linked households, while the per capita wage income is higher' for them than that of non-linked households. The

above analysis reveals that the lower caste and education status, fewer resource endowments and higher number of dependents in the households induce them to go in for interlinkages among the agricultural labourer households. But the per capita wage income is higher for linked households contrary to the expectations.

Binary logit model is used to analyse the above characteristics further, since we have come across higher per capita wage income for linked agricultural labourer households than that of non-linked households, while all other characteristics are as expected.

**Specification of variables:**

Dependent Variable: Dummy dependent variable 1, if the agricultural labourer household is a linked household and '0' otherwise.

**Explanatory Variable:**

CASTE1: 0, if the household belongs to SC/ST categories, and '1' if the household belongs to Backward Caste (BC) category.

CASTE2: 0, if the household belongs to SC/ST categories, and '1' if it belongs to "Other Caste" (OC) category.

EDU: 1, if the head of household is literate and '0' otherwise.

DUR: Dependent-worker ratio of the household.

OLU: Owned land per worker of the household.

PCU: The amount of per capita wage income of the household expressed in rupees.

PCNLA: The value of per capita non-land assets of the household in Rs.

VIL,1 1, if the village to which the household belongs is commercialised village and '0' if belongs to backward village.

**Table 4.6**  
**Characteristics of Linked and Non-linked Agricultural Labour Households**

Sl. No.	Particulars of the Characteristics	Developed village			Commercial Village			Backward Village		
		Linked HHs	Nonlinked HHs	All HHs	Linked HHs	Nonlinked HHs	All HHs	Linked HHs	Nonlinked HHs	All HHs
1.	Dependent-Worker ratio	1.59	1.09	1.42	1.41	0.86	1.20	1.63	1.00	1.51
2.	Proportion of SC/St households out of total (%)	45.00	10.00	27.50	54.55	21.43	41.67	36.36	30.77	34.28
3.	Proportion of households having illiterate heads (%)	95.00	85.00	90.00	100.00	92.85	97.22	90.91	76.92	85.71
4.	Proportion of households having higher educated member	5.00	5.00	5.00	4.55	-	2.78	-	-	-
5.	Average owned area per worker (ac)	0.38	0.42	0.40	0.57	0.99	0.69	0.81	1.36	0.98
6.	Per capita wage income (Rs.)	1216	1162	1190	1025	904	984	1072	832	995
7.	Per capita nonland asset value (Rs.)	2002	3103	2530	1531	1973	1682	1893	1732	1841

Source: Field data

**Table 4.7**  
**Maximum Likelihood Estimation of Dichotomous Logit Relationship (Dummy dependent variable: 1, if the agricultural labour household is a linked one and '0' otherwise) Agricultural Labourer Households**

Explanatory variables	Coefficient	T-Ratio
1. CASTE 1	-0.9300***	-1.7129
2. CASTE 2	-1.6237	-1.2015
3. EDU	-27.512	-0.0001
4. DWR	0.1523	0.7940
5. OLU	-0.3491	-1.1644
6. PCW	-0.00006	-0.1566
7. PCNLA	-0.00004	-0.3297
8. VIL 1	-0.3286	-0.5358
9. VIL 2	-1.1727***	-1.9367
Constant:	1.4875	
Log-Likelihood function:	-56.487	
No. of observations:	94	
Degrees of freedom:	9	
Percentage of Right Predictions:	69.15%	

\*\*\* The coefficient is significant at 10% level

VII.2: 1, if the village to which the household belongs is the developed village and 'Q' if it belongs to backward village.

As already explained earlier, we expect negative signs both for CASTE1 and CASTE2. since the probability of interlinkage may be lower if the household is other than from SC/ST category. we also expect negative association of EDU with dependent variable, as possibility of interlinkage may be lower for literate households. However, there may be a positive association for the variable DWR with dependent variable. As discussed above, the variables OLU, PCNLA may get negative signs with dependent variable. Though we observed positive association for the variable PCU in the tabular analysis, we expect negative association with dependent variable since the probability of an household going for adverse credit-labour contract, will be less with higher per capita wage income. we also expect negative) signs for the variables VIL1 and VIL2, as we have already observed that the extent of interlinkages are higher in backward village than that of other two villages.

The results of the binary logit model are given in Table 4.7. The coefficients of all the variables have the expected signs. However, only the coefficients of CASTE1 and VIL2 are statistically significant at 10% level. The results indicate that the probability of an agricultural labour households becoming a linked one is higher, if the household belongs to Scheduled Caste/Tribe categories. Further the occurrence of an household being linked is higher if the household is in backward village compared to that of developed village. We now turn to the discussion of the characteristics of cultivator households.

### **Household Characteristics of Cultivators:**

The characteristics of linked households among cultivators are quite contrasting to that of agricultural labourers. Though the caste and education status are lower for the linked cultivator households (like that of agricultural labourers), the higher average owned area per worker (except in backward village), the higher percentage of irrigated area (except developed village), the more per capita crop income and the higher amount of nonland asset value (except backward village) for the linked cultivator households (Table 4.8) reveals that the cultivator households having relatively higher resource endowments are preferring the linkages unlike the agricultural labourer households.

To examine the characteristics of the cultivators further who are entering into interlinkagea with that of non-linked cultivators, further analysis is made through Binary Logit Model. We have included other variables also in addition to the variables discussed above.

### **Specification of Variable**

Dependent Variable; Dummy dependent variable) 1, if the cultivator household is a linked household and '0' otherwise.

### **Explanatory Variable:**

CASTE1: 0, if the household belongs to SC/ST categories, and '1' if the household belongs to Backward Caste (BC) category.

CASTE2: 0, if the household belongs to SC/ST categories, and '1' if it belongs to "Other Caste' (OC) category.

**Table 4.8**  
**Characteristics of Linked and Non-linked Cultivator Households**

SI. Particulars of the No. Characteristics —	Developed Village			Cowercial Village			Backward Village		
	Linked	Nonlinked	Total	Linked	Nonlinked	Total	Linked	Nonlinked	Total
	HHs	HHs	HHs	HHs	HHs	HHs	HHs	HHs	HHs
1. Proportion of SC/ST households out of total (%)	11.11	-	6.56	24.14	-	18.72	18.52	16.67	17.78
2. Proportion of households having illiterate heads (%)	80.56	72.00	77.05	62.07	75.00	64.86	77.78	66.67	73.33
3. Proportion of households having higher educated tethers	11.11	16.00	13.11	6.90	12.50	8.11	3.71	5.55	4.45
4. Average owned area per worker (ac)	1.78	1.63	1.71	3.83	1.55	3.22	2.05	2.52	2.19
5. Percentage of irrigated area cut of total	67.44	79.57	72.35	26.64	10.94	24.56	19.01	18.57	18.85
6. Per capita crop income (Rs.)	3503	3078	3363	2893	1007	2415	1304	1138	1245
7. Per capita nonland asset value (Rs).	6362	5422	6111	4986	2679	4401	3697	4192	3873

**Table 4.9**  
**Maximum Likelihood Estimation of Dichotomous Logit**  
**Relationship (Dummy dependent variable: 1, if the farm**  
**household is a linked one and '0' otherwise)**  
**Cultivator Households**

Explanatory variables	Coefficient	T-Ratio
1. CASTE 1	-0.6849	-1.5162
2. CASTE 2	-0.2130	-0.3867
3. EDU	-0.4637	-0.8530
4. EDM	0.0433	0.1323
5. TOTOP	0.0243	0.8850
6. IR/OP	0.0022	0.4042
7. GNUT/GCA	0.0201*	3.0900
8. PCC	.00013	0.2591
9. PCNLA	0.0020	0.4019
10. VIL 1	0.5134	1.2612
11. VIL 2	-0.0374	-0.1155
Constant:	-0.3030	
Log-Likelihood function:	-60.98	
No. of observations:	104	
Degrees of freedom:	11	
Percentage of Right Predictions	71.15%	

\* The coefficient is significant at 1% level

1EDU: 0, if the head of household is Illiterate and  
'1' otherwise.

EDM: '0' if all the major members of the household  
are illiterates and '1' if any one of the  
major members is literate.

TOTOP: Total operated area of the household in acres.

IR/OP: Percentage of irrigated area of the household  
out of total operated area

$$= \frac{\text{Total irrigated area}}{\text{Total operated area}} \times 100$$

GNUT/GLA: Percentage of area under groundnut crop out of  
gross cropped area

$$= \frac{\text{Area under groundnut crop}}{\text{Gross cropped area of the household}}$$

PCC: Per capita crop income in Rs.

PCNLA: Per capita non-land farm asset value in Rs.

VIL1: 1, if the village to which the household  
belongs is commercialised village and '0' if  
belongs to the backward village.

VIL2: 1, if the village to which the household  
belongs is the developed village and '0' if  
it belongs to the backward village.

As already observed earlier in case of analysis on characteristics of agricultural labourers as well as in the above tabular analysis with regards to cultivators also, we expect negative sign both for CASTE1 and CASTE2, as the probability of linkage may be lower if the household is other than from SC/ST category. We further expect negative association with dependent variable both for EDU and EDM since the possibility of interlinking may be lower for literate households. On the other hand, we expect the positive signs for TOTOP, IR/OP, PCC and PCNLA, as we have

observed in the tabular analysis that the probability of linkages are higher among the households who are possessed with higher resource endowments. Since the groundnut crop is playing important role in the interlinkages of cultivators with that of commission agents, we expect positive association of the variable, GNUT/GCA with the dependent variable. We have observed earlier in Table 4.1 that the extent of linked households among cultivators are the highest in commercialised village, followed by backward village and developed village in that order. Therefore we expect positive sign for VII.1 variable and negative sign for VIL2 variable as they represent commercialised and developed villages respectively.

The results of the Binary Logit analysis (Table 4.9) show that all the variables are having expected signs except EDPI i.e., the education level of other major members of the household. The analysis reveals the strong association of cropping pattern with linkage of households. The probability of a cultivator household becoming an interlinked one significantly higher, if the household is growing groundnut crop, since the GNUT/GCA variable is highly significant at 1% level. The other variables of denoting higher resource endowments also are in positive association with the linkage. An important observation made by us in the above analysis is that the extent of groundnut crop grown by an household is playing an important role and significantly increasing the probability of a cultivator being interlinked, since the groundnut is the major crop of of business interest to the commission agents operating in the study area. The field observations also reveal that the commission agent fixes the

credit limit to be advanced to a cultivator based on the extent of groundnut crop grown/proposed to be grown by the farmers. Though jowar is the major crop in the area, since it is not sold in the market yard, the extent under jowar crop is irrelevant to the commission agent either in taking the decision of giving a loan to a cultivator or in fixation of credit limit.

The analysis reveals the contrasting nature of characteristics of linked households of the agricultural labourers and cultivators. While the less endowed sections among the agricultural labourers are going for interlinkages, the well endowed sections having higher extent of groundnut crop among the cultivators are entering into linkages. While it is reasonable to observe that the less endowed sections of agricultural labourers going for interlinkages, it is puzzling why the better off sections among cultivators entered into interlinkages. Though we have obtained some explanation for the above puzzle in the relationship of inter linkage with the extent of groundnut crop, still it is to be examined what types of interlinkages are operating in the study area and to proceed further to know the association of various type of linkages with various types lenders, purposes and occupation groups.

### **Section III**

#### **Types, of Informal Credit Linkages with Factor and Product Markets**

There are 11 categories of interlinked credit transactions observed in the study area. However, they can be broadly grouped into 4 types of credit linkages based on

the major market with which the transaction is associated. Table 4.10 presents the transactions along with amount of credit involved.

**I Credit Linked with Land Market;** The credit transactions linked with land market are the highest in developed village constituting about 10 per cent of total informal credit amount transactions followed by in backward village (5.66 per cent). Only one transaction is observed in commercialised village. These transactions include credit linked with land mortgages and tenancy market.

**i) Land Mortgages:** Under this type of transactions an agricultural money lender advances credit by taking a parcel of the land of the borrower under Usufructory mortgage. Under this type of mortgage, the borrower / mortgagor delivers possession of the mortgaged land to the lender/mortgagee and authorises him to retain such possession until payment of mortgage money (loan amount) and to raise the crops and receive the income to appropriate the same in lieu of interest. Therefore, the income derived by the lender through either raising of crops or leasing out of the land is considered as implicit interest for the principal amount of credit disbursed by the lender. This type of transactions are observed in three of the scheduled caste households in the developed village." The average size of loan is the highest under these transactions. These typo of transactions

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3. It is observed in the study that an SC household taken a loan of Rs.7000/- under mortgage of its 2 acres of land for meeting the expenses of marriage of son.

Table 4.10  
Extent and Amount Involved under Various Types of Credit Linkages among  
Sample Households

SI. No.	Type of credit linkage	Developed		Commercialised		Backward	
		Village		Village		Village	
		No.	Amount	No.	Amount	No.	Amount
I	Credit linked with	7	40900	1	1300	5	13700
	land market	(5.43)	(10.37)	(1.30)	(0.58)	(4.42)	(5.66)
	i) Land mortgages	3	18900	1	1300	-	-
		(2.33)	(4.79)	(1.30)	(0.58)		
	ii) Tenancy market	4	22000	-	-		13700
		(3.10)	(5.58)			(4.42)	(5.66)
II	Credit linked with	13	43000	28	59450	20	51200
	labour market	(10.08)	(10.90)	(36.36)	(26.62)	(17.70)	(21.14)
	i) Annual farm servants	7	25000	11	28700	10	31500
		(5.43)	(6.34)	(14.29)	(12.85)	(8.85)	(13.01)
	ii) Migrant labour	4	16000	4	11600	10	19700
		(3.10)	(4.05)	(5.19)	(5.19)	(8.85)	(8.13)
	iii) Casual labour	2	2000	13	19150	-	-
		(1.55)	(0.51)	(16.88)	(8.58)		
III	Credit linked with input	37	111500	29	121230	31	72920
	and Output markets	(28.68)	(28.26)	(37.67)	(54.29)	(27.43)	(30.11)
	i) Input market	10	21500	2	1630	1	260
		(7.75)	(5.45)	(2.60)	(0.73)	(0.88)	(0.11)
	ii) Output market	11	25500	8	49500	12	47200
		(8.53)	(6.46)	(10.39)	(22.17)	(10.62)	(19.49)
	lii) Input-Output markets	16	64500	19	70100	18	25460
		(12.40)	(16.35)	(24.68)	(31.39)	(15.93)	(10.51)
IV	Other credit linkages	21	33890	5	2935	17	6205
		(16.28)	(8.59)	(6.49)	(1.31)	(15.05)	(2.56)
	i) Nagu (kind to kind)	14	10640	5	2935	16	5705
		(10.85)	(2.70)	(6.49)	(1.31)	(14.17)	(2.35)
	ii) Vadla Voppandam (cash to grain)	4	3250	-	-	-	-
		(3.10)	(0.82)				
	iii) Others (combination of any two of above linkages)	3	20000	-	-	1	500
		(2.33)	(5.07)			(0.88)	(0.21)
V	Nonlinked credit	51	165200	14	38400	40	98160
	(cash to cash)	(39.53)	(41.88)	(18.18)	(17.20)	(35.40)	(40.53)
	Total informal credit	129	394490	77	223315	113	242185
		(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)

Note: 1. No. indicates number of credit transactions i.e., number of loans

2. Figures in parentheses indicate percentages to total

Source: Field data

are not found completely in backward village, though the respondents are aware of this practice.<sup>4</sup>

**ii) Tenancy Market**:- These transactions are found both in developed and backward villages constituting 5.58 and 5.6 per cent of total informal credit in developed and backward villages. Under this transaction, the landlord acts as lender also to his tenant. Only nine credit transactions are observed in the study area. In the developed village, there are 25 tenants out of 101 sample households in the village. However, only 4 tenants (16%) availed credit from their landlords. In the backward village, 15 tenants are observed among 80 sample households. But only 5 tenants (.33,33% of total tenants) availed credit from their landlords. However, only 3 tenants are found among the sample households in commercialised village and none of them availed credit. Therefore, it reveals that the proportion of tenants entered into credit linkages is slightly higher in backward village.

**II Credit Linked with Labour Market**: These are the important linked credit transactions in all the villages, more particularly in commercialised village forming about one-fourth of the total informal credit with 36.26 per cent of the total credit transactions in the village. In the backward village also the credit transactions linked with labour constitute about one-fifth of the total informal credit involved in the village. However in the developed village, they form only about 10 per cent both in terms of

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4. it may be because the land is unproductive and the income accruable from the land may not be equivalent even to the nominal interest commonly prevailed in the backward village.

number of transactions as well as amount involved. Under this broad category, three types of labour linkages are observed in the study area.

**i) Credit Linked with "Annual Farm Servant" System**

The Annual Farm Servant (AFS) system is one of the two important avenues at the disposal of the agricultural labourer for getting the credit in the study area. The other being 'migration contracts' which is discussed later. Since the practice of credit advances in lieu of the provision of casual labour' in future is almost bloak in the study area (except for child labour in commercialised village which will be dealt with later in this section), the agricultural labourers who are in need of credit for consumption, marriage or for agricultural investment purposes prefer to become an AFS to get the credit than to go for "contract migration". The annual wages (without food meals) of AFS vary from Rs.2200 in backward village to about Rs.5000 in developed village. For AFS, there is a practice of giving half of the annual wage as an advance (without interest) and a loan of Rs.1000 to 3000 (normally equivalent to half of the annual wage) with an interest rate of 18 per cent to 36 per cent per annum.<sup>5</sup> This type of linkage is more prevalent in the backward village constituting about 13% of total informal

5. Supply of credit from the large farmers to the agricultural labourers is highly limited to the labourers who offer themselves or their family members as AFS. If the demand for credit is urgent and pressing, especially for medical, marriage etc. the agricultural labourer chooses the alternative of AFS arrangement after exploring other possible sources, as a last resort, even though he fully aware of the disadvantage in the transaction.

credit, while in commercialised village also it forms about 12 per cent. However in the developed village, these transactions are the lowest (6.34% of total credit).

**ii) Migrant Labour Contracts;-** Under this type of contracts, which are prevalent in developed and commercialised villages, the large labour contractors provide credit ranging from Rs.2000 to 5000 to the prospective pairs of labourers through local maistries and take them to far off places like Madhya Pradesh, Gujarat for earth work and outskirts of Hyderabad for brick making with a binding to work atleast for 6 to 9 months at a stretch. These transactions constitute about 4 per cent and 5 per cent of total informal credit in the developed and commercialised villages respectively.

On the other hand, in the backward village, -some of the labourers who frequently go for seasonal agricultural migration to the neighbouring state (30-35 km. away) over the years and in direct touch with the large farmers, they could get credit directly from them in lieu of migration work. This type of credit transactions linked with future migration work, constitute about 9 per cent of total informal credit transactions in the backward village. The amount involved under these credit contracts is only 8 per cent of total in the village though more than 90 per cent of all agricultural labourers, small and marginal cultivators engage in this type of migration every year in th backward village and it constitutes as their major income.

iii) **Credit Linked with Casual Labour:-** These transactions are prevalent only in the commercialised village.<sup>6</sup> The credit linkages with future provision of casual labour are totally absent in the backward village and quite negligible in developed village. However, in the commercialised village, though the credit contracts linked with adult casual labour are negligible, the credit transactions linked with 'child' casual labour are quite prevalent. They constitute about 17 per cent of the total credit transactions in the village forming about 8 per cent of the total amount.

### **III Credit Linked with Input and Output Markets**

These are the most important credit transactions in all the three villages both in terms of number of transactions and the amount involved. Especially, in the commercialised village, these constitute more than half of the total

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6. In this village, about 50 acres have been leased in by the progressive farmers of Coastal Andhra region to grow Hybrid Cotton seed during the study period. They prefer to hire child labour for doing the "crossing" operations in the cotton seed production. They require about 10 to 12 children per acre for 6 months. Therefore, they enter 'into agreement with parents of children aged about 10 to 12 years during May-June by paying an interest free advance ranging from Rs.100 to Rs.500 per child which is deductible in the wages at the end of contract period i.e. after 6 months. The wage rate contracted is Rs.6 per day with weekly payments. However, the wage rate is constant at Rs.6/- for the last 3 years, while the market wage rate for adults increased considerably (i.e. Rs.12 to Rs.15 per day) in the village. Though the children get continuous employment for 6 months (at the cost of their primary education), the opportunity income lost is marginally higher, even if we take into consideration, the partial employment in the peak seasons in which the wages for child labour also ranged between Rs.10 to 15 per day. The preference of child labour by the cotton seed farmer may be mainly due to two reasons, i.e. the wage rate is low and the children are suitable for "crossing" operations.

informal credit involved with about 38 per cent of total transactions. In the backward and developed villages also, the amount involved in these transactions is about 30 per cent of total with about same proportion in the number of transactions. Among these, there are three types of credit linkages in the study area.

**i) Credit Linked with Input Market:-** Under this type of linkage an input trader provides the seed, fertilizers, pesticides etc. on credit which is repayable in cash. Though the main concern of the trader in providing inputs on credit, is to increase his total business turnover, he can extract surplus in the form of overpricing of inputs also in the process. These transactions are quite less in the commercialised and backward villages. However, in the developed village, in which two input traders are operating locally, these transactions constitute about 8 per cent of the total with the amount involved is about 5 per cent.

**ii) Credit Linked with Output Market:-** The commission agents located in market yards lend credit in cash which is repayable in output by the farmers, with a view to have assured supply of agricultural output for their commission business. Since the commission agents themselves organise the sale of output brought to the market by the farmer-borrowers, they deduct the credit given by them along with interest ranging from 18% to 36% per annum out of the sale

proceeds.<sup>6</sup> These transactions constitute highest proportion of total credit in commercialised village (22.17 per cent) followed by backward village (19.49 per cent). However, in the developed village they form only about 6 per cent of total informal credit. These inter-village differences are largely due to the cropping pattern. The extent of groundnut crop which is an important crop of interest to the commission agents is highest in commercialised village, followed by backward village. However, in the developed village, paddy is the major crop and the extent of groundnut crop is quite less. Further it can be observed (Table-4.9) that credit amount involved in this transaction is the largest among all other types of credit transactions in the backward village.

**iii) Credit in the form of Input to Output:-** The input traders in the developed village provide agricultural inputs on credit and recover through purchase of output. Some cases of both overpricing of inputs and underpricing output are observed here. However, in the commercialised and backward villages the commission agents either directly provide inputs (especially groundnut seed) or arrange the supply of fertilizers, pesticides etc. on credit through their business associates to the farmer borrowers and recover the same along with interest ranging from 18% to 36% per annum from the

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6. Though there is no underpricing of output marketed in the yard, the field observations reveal that there are widespread malpractices resorted by the commission agents by under weighing of the output of the illiterate borrower-farmers who are aliens in the yard and have no alternative sources of credit, with the connivance of buyers (some commission agents themselves act as buyers), weighmen, hamalis and other worker staff involved in the market on whom the commission agent weilds considerable influence, since they depend on his business turnover for their employment and income.

sales proceeds of output marketed by them. In this case also, the overpricing of inputs supplied and underweighing of output marketed is commonly observed. These transactions are the highest (about one-fourth of total) in the commercialised village constituting 31.39 per cent of total informal credit involved. In the developed and backward villages also they form sizable proportions with 16.35 per cent and 10.51 per cent of total credit involved respectively.

#### **IV Other Credit Linkages**

Though these credit transactions are not linked broadly to a particular market as discussed above, involve credit in the form of either cash or kind (mostly paddy grain for consumption or seed purposes) which is repayable in the form of paddy. Therefore these are either cash to kind or kind to kind transactions. Mostly agricultural money lenders and agricultural labourers / small cultivators are involved in this type of transactions. Two types of credit transactions are observed in this category. However, the third type which involve credit linked with more than one market also grouped in this category.

i) **Nagu (kind to kind)**;- The grain to grain transactions are popularly called as "Nagu" in the study area. An agricultural money lender provides grain of paddy, jowar (sometimes groundnut) etc. during the off season to be repayable in the same kind form during the next immediate

harvest season.<sup>7</sup> Though the amount of credit involved is small in these transactions, these are the most commonly observed transactions among the agricultural labourers and marginal / small cultivators mainly to meet the consumption and seed purposes. These form about 14 per cent and about 11 per cent of total credit transactions in the backward and developed villages respectively. However in the commercialised village, their proportion is only 6.49 per cent.

**ii) Cash to Grain (Vadla Voppandam):-** These transactions are commonly called as "Vadla Voppandam", (i.e. paddy agreement) and found in the developed village only. Under this type, an agricultural money lender provides credit in cash with an agreement to repay a fixed quantity of paddy at the time of harvest.<sup>8</sup> Therefore, it is a type of "predetermined sale", however limited to small quantities. This type of credit contracts are prevailed as a last resort among the landed agricultural labourers and marginal / small cultivators who expect paddy harvest and are in urgent need for credit such as medical purposes.

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7. The quantity repayable is 1H times of the quantity originally borrowed irrespective of the duration. However, the duration normally ranges between 3 to 6 months. If the borrower could not repay during the succeeding harvest season as agreed upon, the credit contract tend to be renewed to next harvest season but with a condition to repay 3 times of the original quantity lent.

8. Generally the cash amount lent ranges between 50 to 60 per cent of the value of the paddy repayable at the time of harvest. For instance, an agricultural money lender provides credit of Rs.70 to 80 per "kunda" (local measure of grain) which costs about Rs.130 to 140 in the market at the time of harvest.

iii) **Others:-** These include the transactions which involve credit linked with more than one market discussed above i.e. the combination of any two of the above linkages.<sup>9</sup>

**Nonlinked Credit:-** These are only the cash to cash credit transactions involving no linkages. The nonlinked credit amount constitute about 40 per cent of the total informal credit in both developed and backward villages, while its proportion is the lowest (17.20 per cent) in the commercialised village.

Out of the four major categories of linkages, the input and output linkages are the highest both with regards to the extent and amount of credit involved in all the villages (Table 4.11). Among the three villages, the extent of credit transactions linked with input and output markets are highest in developed village and lowest in backward village. However, the amount involved with them is about two-thirds of total credit in commercialised and about half in developed and backward villages. Interestingly, the extent of labour linked credit transactions are highest in commercialised village and lowest in developed village. However, the amount involved (proportion out of total linked credit) in labour

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9. For example, an agricultural labourer who enters into credit contract under usufructory mortgage of his land, also works as a casual labourer in lender's farm. Hence, in this case, credit is linked with land and labour markets. A landlord who provides credit to his tenant also purchases the output share of tenant. In this case, credit is linked with tenancy and output markets.

Table 4.11  
Extent of Broad Categories of Linkages among the Linked Credit  
Transactions

Type of Credit Linkages	Developed Village		Commercialised Village		Backward Village	
	No.	Amount	No.	Amount	No.	Amount
	1. Land market	7 (8.97)	40900 (17.84)	1 (1.59)	1300 (0.70)	5 (6.85)
2. Labour market	13 (16.67)	43000 (18.75)	28 (44.44)	59450 (32.15)	20 (27.40)	51200 (35.55)
3. Input and output markets	37 (47.44)	111500 (48.63)	29 (46.03)	121230 (65.56)	31 (42.47)	72920 (50.63)
4. Other linkages	21 (26.92)	33890 (14.78)	5 (7.94)	2935 (1.59)	17 (23.28)	6205 (4.31)
5. Total linked loans	78 (100)	229290 (100)	63 (100)	184915 (100)	73 (100)	144025 (100)

Note: 1. No. denotes the number of credit transactions

2 Figures in parentheses indicate percentages

Source: Field data

linkages is the highest in backward village and lowest in developed village. Other linkages also constitute about one-fourth of total linkages both in developed and backward villages.

#### Section IV

#### Proportion and Extent of Linked and Non-linked Credit Provided by the Lenders

A perusal of Table 4.12 reveals that the entire credit provided by trader lenders is linked credit only in all the three villages. On the other hand, Farmer lenders supplied about half of the credit without any linkages in developed and backward villages and about one-third of credit provided by them is in non-linked form in commercialised village. The

**Table 4.12**

**Extent of Linked and Nonlinked Credit Provided by Informal Lenders to the Sample Households in the Selected Villages**

Particulars of Informal Credit (Linked and nonlinked)	Developed village				Commercialised Village				Backward Village			
	Farmer lenders	Trader lenders	Other lenders	All informal lenders	Farmer lenders	Trader lenders	Other lenders	All informal lenders	Farmer lenders	Trader lenders	Other lenders	All informal lenders
<b>Linked Credit</b>												
Total Volute (Rs.)	100290	111500	17500	229290	52085	121230	11600	184915	72405	68920	2700	144025
Average loan size (Rs.)	2786	3014	3500	2940	1736	4180	2900	2935	1905	2297	540	1973
% of total loans	54.55	100.00	19.23	60.47	75.00	100.00	50.00	81.82	58.46	100.00	27.88	64.60
% of total loan amount	46.74	100.00	25.58	56.12	65.53	100.00	51.33	82.80	52.14	100.00	7.85	59.47
<b>Nonlinked Credit</b>												
Total Volume (Rs.)	114300	-	50900	165200	27400	-	11000	38400	66460	-	31700	98160
Average loan size (Rs.)	3810	-	2424	3239	2740	-	2750	2743	2461	-	2438	2454
% of total loans	45.45	-	80.77	39.53	25.00	-	50.00	18.18	41.54	-	72.22	35.40
% of total loan amount	53.26	-	74.42	41.88	34.47	-	48.67	17.20	47.86	-	92.15	40.53
<b>Total Mortal Credit</b>												
Total Volume (Rs.)	214590	111500	68400	394490	79485	121230	22600	223315	138865	68920	34400	242185
Average loan size (Rs.)	3251	3014	2631	3058	1987	4180	2825	2900	2136	2297	1911	2143
% of total loans	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
% of total loan amount	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Field data.

proportion of linked credit provided by 'other lenders' is considerably less than the other two types of lenders in all the villages. Further, the average size of linked loan amount is higher for trader lenders than that of other two types of lenders (except in developed village). However, it can be noted that the average loan size provided by farmer-lenders is higher for non-linked credit than that of linked credit in all the three villages. It is also interesting to note the average size of linked loan is smaller than that of non-linked one in both the developed and backward villages. It is mainly due to the sizable number of "Nagu" loan given by farmer lenders whose average size is Rs.772 in developed village and only Rs.365 in backward village. If we exclude these transactions from the linked category, the average size of linked loans (other than "Nagu" loans) is larger than that of non-linked loan.

The above analysis shows that the size of informal loan depends on various factors such as linkage, type of lender, purpose of loan and the village in which the transaction is made. We have used multiple regression analysis to analyse the factors determining the size of informal loan in an informal credit transaction. The informal loan amount per transaction (Rs.) is considered as dependent variable. Only borrowed households are considered for the analysis. The independent variables included are as follows:

- X1 = Linkage i.e.
- |                                  |     |
|----------------------------------|-----|
| If the transaction is linked one | = 1 |
| Otherwise                        | = 0 |
- X2 = Occupation class
- |                                       |     |
|---------------------------------------|-----|
| If the households is a cultivator     | = 1 |
| If the household sis an agrl labourer | = 0 |

X3	=	Type of lender 1	
		If the lender is a trader lender	= 1
		Otherwise	= 0
X4	=	Type of lender 2	
		If the lender is a farmer lender	= 1
		Otherwise	= 0
X5	=	Purpose of loan	
		If the loan is for crop production	= 1
		Otherwise	= 0
X6	=	Village 1	
		If the transaction is in developed village	= 1
		Otherwise	= 0
X7	=	Village 2	
		If the transaction is in commercialised village	= 1
		Otherwise	= 0

We expect all the variables expect XI, are positively associated with dependent variable. However, it is expected that XI is negatively associated as we have already observed earlier that an average linked loan is smaller than that of a non-linked one. The result of multiple regression analysis are presented in Table 4.13.

The signs of all variables except that of X5 i.e. purpose of loan are as expected. It may be mainly due to 'Nagu' (kind to kind) loans taken for seed purpose. Though they include loans for consumption purpose also, the field observation reveal that the extent of seed loans are higher than that of consumption, especially in developed and commercialised villages. Though  $R^2$  is considerably low, the coefficients of variables of XI, X3 and X6 are statistically significant. While X3 is significant *1%* level, XI and X5 are significant at *5%* level. As expected the size of informal loan borrowed is negatively associated with linkage and positively associated with trader lender and developed village. The results of the analysis reveal that linked

Table 4.13

Dependent Variable Informal loan amount per transaction (Rs.)

SI.No.	Explanatory variable			Regression	T Ratio
X1 :	Linkages	Linked transaction	= 1	-874.93*	-2.2276
		Otherwise	= 0		
X2 :	Occupation class	Cultivator	= 1	277.09	0.7742
		Agricultural labourer	= 0		
X3 :	Type of lender 1:	Trader lender	= 1	1755.00*	2.9828
		Otherwise	* 0		
X4 :	Type of lender 2:	Farmer lender	= 1	671.79	1.5305
		Otherwise	= 0		
X5 :	Purpose of loan:	Crop production	= 1	-650.32	-1.6298
		Otherwise	= 0		
X6 :	Village 1:	Developed village	* 1	845.99*	2.3863
		Otherwise	= 0		
X7 :	Village 2:	Commercialised village	= 1	636.94	1.5283
		Otherwise	= 0		

Intercept : 2183.80

No. of observations : 319

 $R^2 = 0.0597$        $Adj R^2 = 0.0385$ 

F Value = 2.82

\* The coefficient is significant at 1% level.

\*\* The coefficient is significant at 5% level.

status of loan, and source of loan, play an important role in determining the amount of loan per transaction.

### **Share of Different Lenders out of Total Linked and Non-linked Credit**

Table 4.14 reveals that the total number of linked credit transactions as well as the total amount of linked credit is almost equally shared by farmer-lenders and trader-lenders in the developed and backward villages. However, in the commercialised village, while the number of linked credit transactions are shared by farmer-lenders and trader-lenders equally, the trader-lenders provided about two-thirds of linked credit amount transacted.

Since the trader-lenders did not involved with non-linked credit, the farmer-lenders are the major source of non-linked credit in all the villages. while the non-linked credit by "other lenders" constitute about 30 per cent, the major amount (about 70 per cent) is provided by farmer-lenders only in all the villages. The above analysis reveals that while farmer-lenders and trader-lenders are two important source with equal stature for linked credit, only the farmer-lenders are the major source for non-linked credit.

### **Various Types of Linkages of Credit with Other Markets Associated with the Different Lenders**

The credit transactions linked with factor and product markets observed in the study area are broadly classified here into 4 major types and their association with the different types of lenders is discussed here.

Table 4.14

Share of Different Lenders	Out of Linked	and Nonlinked	Credit		
SI, No.	Type of lenders/village	% share out of total linked loans in the village	% share out of total linked credit in the village	% share out of total nonlinked loans in the village	% share out of total nonlinked credit in the village
<b>Developed Village</b>					
1.	Farmer-lenders	46.15	43.74	58.82	69.19
2.	Trader-lenders	47.44	48.63	-	-
3.	Other lenders	6.41	7.63	41.18	30.81
4.	All informal lenders	100.00	100.00	100.00	100.00
<b>Commercialised Village</b>					
1.	Farmer-lenders	47.62	28.17	71.43	71.35
2.	Trader-lenders	46.03	65.56	-	-
3.	Other lenders	6.35	6.27	28.57	28.65
4.	All informal lenders	100.00	100.00	100.00	100.00
<b>Backward Village</b>					
1.	Farmer-lenders	52.05	50.27	67.50	67.71
2.	Trader-lender8	41.10	47.85	-	-
3.	Other lenders	6.85	1.88	32.50	32.29
4.	All informal lenders	100.00	100.00	100:00	100.00

Source: Field Data

It can be observed from Table 4.15 that the farmer-lenders are mainly associated with credit linked with land and labour markets in all the villages, while the trader lenders are associated with the credit linkages of input and output markets. The other lenders who constitute the labour contractors are associated with credit linked with labour market only.

Further, it can be seen that the labour, and input-output market linked credit constitute about 90 per cent of total linked credit in commercialised and backward villages. On the other hand, all the types of credit linkages are existing in sizable proportions in the developed villages.

**Extent of Linked and Non-linked Credit Provided for Various Purposes**

A perusal of Table 4.16 reveals that the proportion of linked credit gone for crop production purpose is higher (i.e. more than 60 per cent in all villages) than that of nonlinked credit. However, it is vice-versa in case of agricultural investment and consumption purposes, i.e., the proportion of credit provided for the above purposes is more from nonlinked credit than that of linked credit. Among different linkages, while the credit advanced through input and output linkages is mainly gone to crop production purposes, the majority of credit under land and labour linkages is provided to consumption purpose only (except in the backward village). Among the credit under "other linkages" while major portion is provided for consumption purpose in developed village, it is higher for crop production purpose in the other two villages. It is interesting to note that the proportion of credit going for

**Table 4.15**

Proportion of Credit under Various Types of Linkages Provided by Three Categories of Lenders in the Selected Villages  
(Figures in percentages)

Sl. No	Credit linkages with	Developed village				Coaercialised Village				Backward Village			
		Farmer lenders	Trader lenders	Other lenders	All lenders	Farmer lenders	Trader lenders	Other lenders	All lenders	Farter lenders	Trader lenders	Other lenders	All lenders
1.	Land market	40.78	-	-	17.84	2.50	-	-	0.70	18.92	-	-	9.51
2.	Labour market	26.92	-	91.43	18.75	91.87	-	100.00	32.15	66.98	-	100.00	35.55
3.	Input & Output market	-	100.00	-	48.63	-	100.00	-	65.56	-	100.00	-	50.63
4.	Other linkages	32.30	-	8.57	14.78	5.63	-	-	1.59	8.57	-	-	4.31
5.	Total linked credit	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Field Data

**Table 4.16**

**Distribution of Linked and Nonlinked Credit under Various Purposes**

Sl. No.	Type of linkage	Developed village				Commercialised village					Backward village					
		Crop production	Agri. investment	Consumption	Others	All purposes	Crop production	Agri. Investment	Consumption	Others	All purposes	Crop production	Agri. investment	Consumption	Others	All purposes
	Credit Linked with	19000	-	21900	-	40900	-	-	1300	-	1300	6700	7000	-	-	13700
1.	Land market	(46.45)		(53.54)		(100.00)			(100.00)		(100.00)	(48.91)	(51.09)			(100.00)
2.	Labour market	3000	-	40000	-	43000	3000	-	41450	15000	59450	5500	21000	23400	1300	51200
		(6.98)		(93.02)		(100.00)	(5.05)		(69.72)	(25.23)	(100.00)	(10.74)	(41.02)	(45.70)	(2.54)	(100.00)
3.	Input & Output market	110500	-	-	1000	111500	121230	-	-	-	121230	72920			-	72920
		(99.10)			(0.90)	(100.00)	(100.00)				(100.00)	(100.00)				(100.00)
4.	Other linkages	16390	-	17500	-	33890	2535	-	400	-	2935	5105	-	1100	-	6205
		(48.36)		(51.64)		(100.00)	(86.37)		(13.63)		(100.00)	(82.27)		(17.73)		(100.00)
a.	Total linked credit	148890	-	79400	1000	229290	126765	-	43150	15000	184915	90225	28000	24500	1300	144025
		(64.94)		(34.63)	(0.43)	(100.00)	(68.55)		(23.34)	(8.11)	(100.00)	(60.65)	(19.44)	(17.01)	(0.90)	(100.00)
b.	Nonlinked credit	91100	14000	60100	-	165200	7400	10000	21000	-	38400	22860	39300	36000	-	98160
		(55.15)	(8.47)	(36.38)		(100.00)	(19.27)	(26.04)	(54.69)		(100.00)	(23.29)	(40.04)	(36.67)		(100.00)
c.	Total informal credit	239990	14000	139500	1000	394490	134165	10000	64150	15000	223315	113085	67300	60500	1300	242185
		(60.84)	(3.55)	(35.36)	(0.25)	(100.00)	(60.08)	(4.48)	(28.72)	(6.72)	(100.00)	(46.69)	(27.79)	(24.98)	(0.54)	(100.00)

Note: Figures in brackets indicate percentages.

Source: Field data.

agricultural investment purpose is considerably high in backward village under land and labour linkages as well as in the nonlinked credit. Field observations reveal that this may be due to the efforts of the landed agricultural labourers and marginal/small cultivators of backward village in the development of their land through minor irrigation. They availed loans for agricultural investment purposes from the large farmers of the area to which they go for seasonal migration for 5 times in a year during the peak seasons. The above data clearly shows that credit linked with labour has gone mainly for consumption purposes, while that of input-output linkages to production-purposes.

Since the proportion of linked credit is higher (i.e. about 60 per cent in developed and backward villages and about 80 per cent in the commercial village) in all the villages, the share of linked credit is also higher both for crop production and consumption purposes. However, in the backward village, major portion of the consumption credit is of nonlinked type (Table 4.17). Further it can be seen that majority of agricultural investment credit is nonlinked in all the villages.

**Purpose-wise Distribution of Linked and Won-linked Credit Provided by Lender Types**

A perusal of Table 4.18 reveals that almost all of the linked credit provided by Trader-lenders is going for crop production purpose only. On the other hand, majority of linked credit supplied by farmer lenders has gone to consumption purpose in developed village (61.72 per cent) and commercialised village (79.77 per cent). However, in the

**Table 4.17****Linked and Nonlinked Proportions of Credit for Various Purposes**

(Figures in percentages)

Sl. No.	Various purposes	Developed village			Commercialised village			Backward village		
		Linked credit	Nonlinked credit	Total informal credit	Linked credit	Nonlinked credit	Total informal credit	Linked credit	Nonlinked credit	Total informal credit
1.	Crop production	62.04	37.96	100.00	94.48	5.52	100.00	79.79	20.21	100.00
2.	Agricultural investment	-	100.00	100.00	-	100.00	100.00	41.60	58.40	100.00
3.	Consumption	56.92	43.06	100.00	67.26	32.74	100.00	40.50	59.50	100.00
4.	Other purposes	100.00	-	100.00	100.00	-	100.00	100.00	-	100.00
5.	All purposes	58.12	41.88	100.00	82.80	17.20	100.00	59.47	40.53	100.00

Source: Field data

**Table 4.18****Distribution of Liked and Nonlinked Credit provided by Lender Classes among Different Purposes for Sample Households**

(Amount in Rs.)

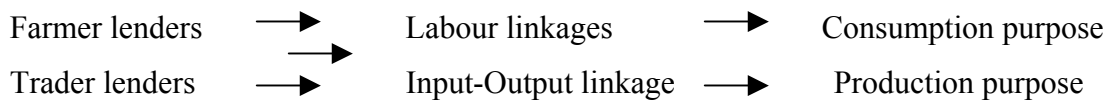
Sl. No.	Purpose	Developed village				Commercialised Village				Backward Village			
		Farmer lenders	Trader lenders	Other lenders	All lenders	Farmer lenders	Trader lenders	Other lenders	All lenders	Farmer lenders	Trader lenders	Other lenders	All lenders
<b>Linked Credit</b>													
1.	Crop production	36390 (38.28)	110500 (99.10)	-	148890 (64.94)	5535 (10.63)	121230 (100.00)	-	126765 (68.55)	21305 (29.43)	68920 (100.00)	-	90225 (62.65)
2.	Agricultural investment	-	-	-	-	-	-	-	-	28000 (38.67)	-	-	28000 (19.44)
3.	Consumption	61900 (61.72)	-	17500 (100.00)	79400 (34.63)	41550 (79.77)	-	1600 (13.79)	43150 (23.34)	23100 (31.90)	-	1400 (51.85)	24500 (17.01)
4.	Other purposes	-	1000 (0.90)	-	1000 (0.43)	5000 (9.60)	-	10000 (86.21)	15000 (8.11)	-	-	1300 (48.15)	1300 (0.90)
5.	All purposes	100290 (100.00)	111500 (100.00)	17500 (100.00)	229290 (100.00)	52085 (100.00)	121230 (100.00)	11600 (100.00)	184915 (100.00)	72405 (100.00)	68920 (100.00)	2700 (100.00)	144025 (100.00)
<b>Nonlinked Credit</b>													
1.	Crop production	47500 (41.56)	-	43600 (85.66)	91100 (55.15)	6400 (23.36)	-	1000 (9.09)	7400 (19.27)	15860 (23.86)	-	7000 (22.08)	22860 (23.29)
2.	Agricultural investment	14000 (12.25)	-	-	14000 (8.47)	10000 (36.50)	-	-	10000 (26.04)	16600 (25.28)	-	22500 (70.98)	39300 (40.04)
3.	Consumption	52600 (46.19)	-	7300 (14.34)	60100 (36.38)	11000 (40.14)	-	10000 (90.91)	21000 (54.69)	33800 (50.66)	-	2200 (6.94)	36000 (36.69)
4.	Other purposes	-	-	-	-	-	-	-	-	-	-	-	-
5.	All purposes	114300 (100.00)	-	50900 (100.00)	165200 (100.00)	27400 (100.00)	-	11000 (100.00)	38400 (100.00)	66460 (100.00)	-	31700 (100.00)	98160 (100.00)

Note: Figures in brackets indicate percentages.

Source: Field data.

backward village, about two-thirds of linked credit is provided for crop production and agricultural investment purposes by the farmer-lenders. The other lenders also supplied most of the linked credit to consumption and other purposes.

The situation is quite contrasting with regards to non-linked credit. It can be noted that more than half of the non-linked credit supplied by farmer-lenders has gone to crop production and agricultural investment purposes in all the three villages. The other lenders also provided most of the non-linked credit to crop production and agricultural investment purposes in developed and backward villages. Therefore, the foregoing analysis reveals that barring the trader-lenders whose main interest is crop production, most of the linked credit provided by other than trader-lenders has gone to consumption purposes, while majority of the non-linked credit is provided for production purposes. Now the question that arises is why the farmer lender provide most of the linked credit for consumption purposes, while the trader lenders only for production purposes? This can be better explained if we examine the occupation groups with which these lenders are associated, which is discussed in detail in Chapter V. However, we have already observed that farmer lenders are mostly associated with labour linkages. And also we observed that most of credit involved in labour linkages has gone for consumption purposes. On the other hand, the trader lenders are associated with input-output market linkages under which most of credit has been provided to production purposes. Thus the following two major channels are emerged at the supply side.



#### SECTION IV

##### Conclusions

The analysis reveals that the extent of interlinkages are higher in commercialised village than that of other two villages. The interlinked transactions are found to be higher among agricultural labourers than cultivators, though majority of the households in both the occupation groups involved in interlinkages.

Further, it is interesting to note that the characteristics of linked households are quite contrasting in between agricultural labourers and cultivators. Though the caste and education status are lower for linked households of both the agricultural labourers and cultivators, the cultivator households, who have higher resource endowments entered into interlinkages unlike agricultural labourers among whom, the households with fewer resource endowments drawn into interlinkages.

An important observation made in the study is that the extent of groundnut crop grown by a household played an important role and significantly increased the probability of a cultivator being interlinked, since the groundnut is the major crop of business interest to the commission agents operating in the study area. Thus, the relationship between extent of interlinkages and cropping pattern is clearly established in the study.

Therefore, it can be inferred that the phenomenon of interlinkage is not confined to poor households only and the interlinked transactions also may not always be between two parties of unequal bargaining power i.e., a dominant party and a weaker party, as argued by some of the researchers. Our finding reveals that there is a possibility of linked transactions being put through between the two parties of equal bargaining power also.

A variety of interlinked transactions are found in the study, which are broadly categorised as land, labour, input-output and other linkages. Out of these categories, the input and output linkages are the largest both with regards to extent and amount involved in the study area. Labour market linkage is the next important type of linkage. Thus input-output market and labour market linkages are the two major types of credit interlinkages constituting 70 to 90% of the total linked credit involved in the study area. While the trader lenders provided only linked credit, the farmer lenders supplied about one-third to half of their credit without any linkages.

The analysis reveals that farmer-lenders are mainly associated with land and labour market linkages, while the trader-lenders are associated with the credit linkages of input-output markets. Among different linkages, while credit advanced through input-output linkages is mainly gone to crop production purposes, the majority of credit under land and labour linkages is provided to consumption purposes only.

Almost all the linked credit supplied by trader lenders has gone for crop production purposes only. On the other hand

farmer lenders provided majority of linked credit to the consumption purpose. However, more than half of the non-linked credit supplied by farmer lenders has gone to crop production and agricultural investment purposes. The analysis reveals that most of the linked credit provided by other than trader lenders has gone to consumption purposes, while majority of non-linked credit is provided for production purposes. Thus the following two major channels are emerging in the study at the supply side of the credit markets.

