

## **Chapter - VI**

### **Impact of Agricultural Credit**

#### **6.1: Introduction**

Economic development in real sense is possible only when development of the weaker sections takes place<sup>1</sup>. The weaker sections in India consist of small farmers, marginal farmers, agricultural labourers etc. With a view to achieving this economic development RRBs disburse credit to the rural people. It is natural that the banks expect the borrowers to make proper utilisation of credit. If the credit is utilised properly for the purposes for which it was sanctioned, its impact i.e, flow of benefit to the beneficiaries, will help in improving their economic status. Scientific use of credit creates additional employment opportunities, increases income of the borrowers and helps to increase their living standard.

The present study aims to find out the impact of the schemes financed by UBKGB on the economic conditions of the rural people. The aspects are detailed under three heads, viz., credit impact on employment, on income and on living standard of weaker sections taking credit from the UBKGB.

#### **6.2 Impact of Credit on Self-employment.**

The bank finance issued to the rural poor is aimed at the removal of unemployment through the generation of additional employment . In order to assess the benefits derived by the borrowers, required data have been collected from them on the number of months worked in a year at two points of time, viz. pre-loan and post loan periods. For analyzing the impact of credit on generation of employment , the average annual employment (in months) of the borrowers is worked out.

Table 6.1 shows a detailed picture relating to the employment position of borrowers alone at two points of time viz. pre-loan and post-loan periods. It can be seen from the table that before availing the credit the employment of the borrowers was for about 6 months in a year in the activity for which loan was taken. While in the post-loan period such employment is estimated as 7 months a year. The bank credit thus generates additional employment to the borrowers in the scheduled activity for months in a year representing a 21.75 percent increase over the period.

**Table 6.1: Annual Employment Position of the Borrowers in the District(in month)**

No of borrowers	Average self employment pre-loan	Average self employment post-loan	Difference in employment	Percent change in employment
160	6.078	7.4	1.322	21.75

Source : Sample Survey, 2006-2007

Now an appropriate significance test would allow us to know exactly whether the variation in the self-employment in the district from the loan based activity in the post loan period differs significantly over the pre loan period.

“t” test of significance has been selected for necessary appraisal. In order to apply the t-test the null hypothesis set up is  $H_0$  : There is no variation in self employment of the borrowers in the post loan period. From table 6.2 it is clear that the calculated ‘t’ value (4.156) is higher than the table value (1.96) at 5 percent level, which indicates that the variation in the self employment of borrowers is statistically highly significant.

**Table 6.2 : Variation in the Self-employment of Borrowers**

Statistics		t-statistics for difference of mean
Mean difference	1.322	4.156*
SD	4.0237	
Maximum	9.0	
Minimum	-10.0	
No of observations	160	

Note : \*significant at 5 percent level.

Block-wise impact of credit on employment position of the sample respondents (table 6.3) shows that additional employment among the borrowers has invariably been generated in all selected villages under three blocks after availing the bank credit. The table shows that the rate of employment generation is the highest in two villages under Maynaguri block with 34.22 percent increase. The percentage in employment generation in the selected villages under Jalpaiguri sadar is 22.49 percent but the lowest increase is recorded in Rajganj block viz., 10.16 percent.

The table further shows that in the post loan period, on an average about 2 months of self employment has been generated additionally to the borrowers in two villages (combined) under Maynaguri block over the pre-loan period. While on an average about 1 month of self employment has been generated in the post loan period to the borrowers in combined two villages under Jalpaiguri sadar and it is about 0.67 months under Rajganj block.

**Table 6.3: Block-Wise Classification of Annual Employment Position of the Borrowers ( in Months)**

Block	No of borrowers	Mean self employment per-loan	Mean self employment post-loan	Difference in employment	Percent change in employment
Maynaguri	53	5.72	7.68	1.96	34.27
Jalpaiguri sadar	54	5.93	7.26	1.33	22.43
Rajganj	53	6.59	7.26	0.67	10.16

Source: Sample Survey, 2006-07

The dispersions of the months of work among the selected villages under three blocks as measured by SD and CV are shown in the table 6.4.

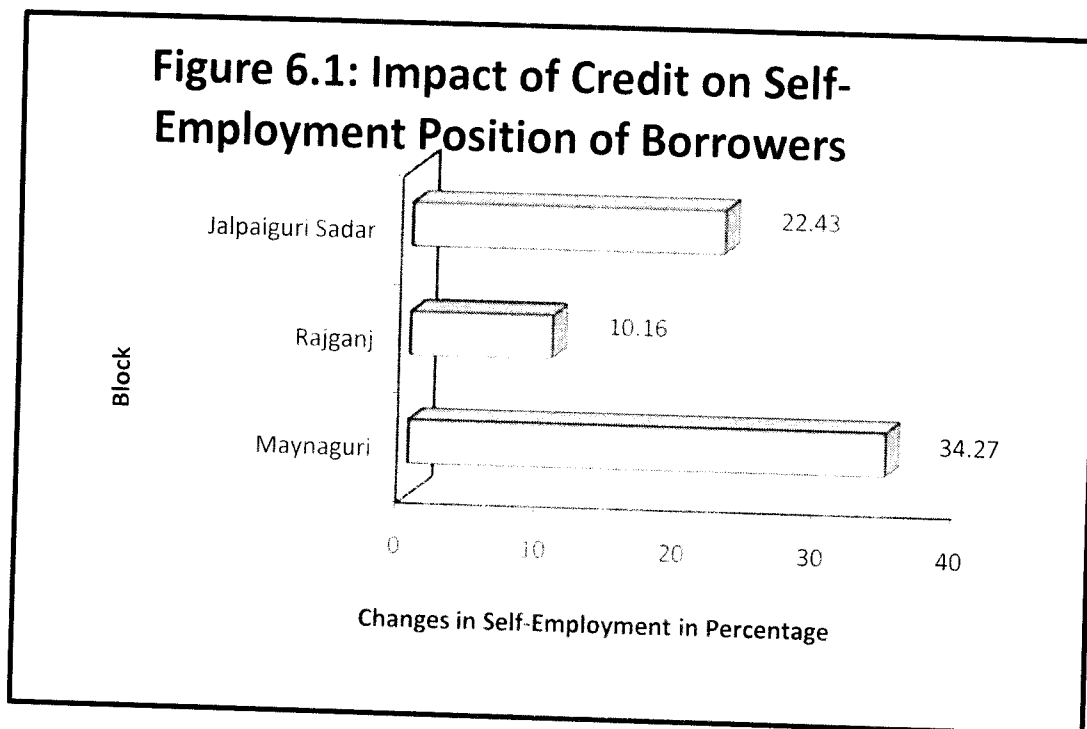
**Table 6.4 : Variation in Self employment Position of the Sample Borrowers.**

Blocks	SD		CV	
	Pre-loan period	Post- loan period	Pre-loan period	Post period
Maynaguri	3.152	2.914	55.105	37.943
Jalpaiguri sadar	3.213	3.211	54.182	44.229
Rajganj	3.393	3.001	51.487	41.336

Source : Sample Survey, 2006-07

From the table 6.4 we find that in Maynaguri block standard deviation(SD) has decreased from 3.152 to 2.914 and also in Jalpaiguri sadar and Rajganj block standard deviations (SD) have decreased from 3.213 and 3.393 to 3.211 and 3.001 respectively. The table further shows that there is large variation in self employment among the borrowers of Jalpaiguri sadar and little variation among the borrowers of Maynaguri block after availing the credit.

The diagrammatic presentation of impact of credit on self employment position of the sample borrowers among the selected villages is shown in figure 6.1.



In order to test the variations in the self employment of the borrowers in the six selected villages, 't' test has been applied. The table 6.54 show that the 't statistics' for difference of mean employment shows that there is a significant difference in self employment of the sample borrowers between pre-loan and post periods except in the selected villages under Rajganj block.

**Table 6.5 : Annual Employment Position of the Borrowers in Six Selected Villages Under Different Blocks**

Block	Mean difference in employment	Standard deviation	't' value
<u>Maynaguri</u> Bhelbhela & Husludanga	1.962	0.5663	3.47*
<u>Jalpaiguri sadar</u> Choudhury Para & Danguajhar	1.333	0.5766	2.31*
<u>Rajganj</u> Kaluarbari & Mogha Para	0.670	0.5020	1.33**

\*Significant at 5 percent level

\*\*Not significant.

Source : Field Survey, 2006-07

In order to test differences among more than two groups of data , where more than two means are involved in the analysis, the method of ANOVA has been selected for calculating variations. Now we have to test whether employment generation differs significantly among the villages under different blocks. For this purpose the null hypothesis of “no difference” in employment generation among the villages has been tested.

ANOVA results are presented in table 6.6

**Table 6.6: F-Test**

Sources of Variation	df	MS	F
Between the groups	2	22.139	1.374
Within the groups	157	16.114	

Since the observed value of F (viz.1.374) is less than table value at 0.05 level indicating that employment generations among the blocks are equal. Thus we can say that employment of the borrowers has been generated at an uniform rate among the blocks.

### **6.2.1 Employment Generation by Different Categories of Borrowers**

The mean self employment from the loan based activity, difference in employment and percentage change in employment of the borrowers belonging to different land size groups in the selected villages under Maynaguri block are presented in table 6.7. It can be seen from the table that the additional employment has been generated among all the categories of farm size though its magnitude varies from one category to another. In the post loan period the mean annual increase in self- employment per farm size works out to be the highest of the borrowers belonging to medium farmers (4.83 months), followed by marginal farmers (1.875 months), small farmers (1.772 months) and lowest for agricultural labourers (1.34 months). While the percentage of

increase in employment generation is the highest for borrowers belonging to medium farmers (120.75 percent), followed by marginal

**Table 6.7: Farm-Size wise Classification of Self- employment position in the Selected Villages under Maynaguri Block**

Farm size	No. of borrowers	Mean self employment pre-loan	Mean self employment post	Difference in employment	Percent change in employment	t value
SF	22	5.864	7.636	1.772	30.22	2.231*
MF	16	5.5	7.375	1.875	34.09	1.661
MF*	6	4	8.83	4.83	120.75	3.642*
AL	9	6.22	7.56	1.34	21.54	0.877

\*Significant at 5 percent level

Source: Sample Survey , 2006-07

farmers (34.09 percent), small farmers (30.22 percent) respectively, it is only 21.54 percent in the case of borrowers belonging to agricultural labourers. Table 6.7 further shows that mean self employment position of the borrowers under marginal farmers and agricultural labourers are not statistically significant at 5 percent level.

In order to test the variation in self-employment position among the farm sizes one-way ANOVA has been applied. From the table it is clear that the calculated value (1.307) is smaller than the table value at 5 percent level. So we accept the null hypothesis. This implies that the employment

**Table 6.8: One-way ANOVA**

Source	MS	df	F
Between group	21.83	3	1.307
Within group	16.70	49	

Source : Sample Data, 2006-07

opportunities has been generated at an uniform rate among the farm sizes in two villages under Maynaguri block.

Table 6.9 shows that the details of the generation of additional employment of different farm sizes in Jalpaiguri sadar. It may be observed that in Jalpaiguri sadar, among the four farm categories that have received bank loans, the borrowers under agricultural labourers ranks first in the matters of employment generation (64.54 percent) followed by medium farmers (21.95 percent) and marginal farmers (17.88 percent) respectively. But the borrowers under small farmers category have recorded only 11.87 percent of additional self employment. The variation in self employment generation of the borrowers under agricultural labourer category is only statistically significant at 5 percent level.

**Table 6.9: Farm Size-wise Classification of Self Employment Position in Two Selected Villages under Jalpaiguri Sadar.**

Farm size	No. of borrowers	Mean self employment pre-loan	Mean self employment post-loan	Difference in employment	Percent change in employment	t' value
SF	17	5.206	5.824	0.618	11.87	0.744
MF	23	6.565	7.739	1.174	17.88	1.107
MF	6	6.833	8.333	1.5	21.95	0.946
AL	8	4.938	8.125	3.187	64.54	2.64*

\*Significant at 5 percent level

Source : Sample Survey, 2006-07

Now to test the employment generation among the all land size groups in two selected villages under Jalpaiguri sadar, ANOVA has been applied. ANOVA results are shown in table 6.10.



**Table 6.10: ANOVA Results.**

Sources of variation	Df	MS	F	Significant
Between groups	3	5342632.22		
Within groups	50	2374705.03	2.250	0.094

Here calculated value of F is significant at 10 percent level. Hence the employment generation among the farm sizes in two selected villages under Jalpaiguri sadar has been created after availing bank loan.

Since F-ratio in ANOVA of data is significant at the given level, post Hoc test is used to uncover the group (s) contributing to the significant result. For this purpose the method considers contrast pairs among means.

**Table 6.11: Multiple Comparisons for Testing Significance Contributed by Land Holding Groups in Selected Villages under Jalpaiguri Sadar .**

Farm size number(i)	Farm size number(j)	Mean Difference (i-j)	Significant
1.	2	-172.06	1.000
	3	179.35	1.000
	4	-1641.67	0.325
2.	1	172.06	1.000
	3	351.41	1.000
	4	-1469.61	.300
3.	1	-179.35	1.000
	2	-351.41	1.000
	4	-1821.01*	0.078
4.	1	1641.67	0.325
	2	1469.61	.300
	3	1821.01*	0.078

The mean difference is significant at 0.1 level. 1=AL, 2=SF, 3=MF, 4=MF\*

The table 6.11 shows that contrast pair (3-4) or (4-3) is significant by post Hoc Test with 0.1.level. Thus the contrast pair (3-4) or (4-3) is contributing significantly in F ratio test, while other contrast pairs are insignificant.

Analysis of the impact of credit on employment creation between pre-loan and post-loan periods in two selected villages under Rajganj block is presented in table 6.12. It is clear that the borrowers belonging to agricultural labourers rank first in the matter of employment generation. After receiving the loan, the borrowers under agricultural labourer category could get an additional employment of 2.28 months representing 41.99 percent increase over pre-loan period. While in the post loan period, on an average only 0.08 months of self employment has been generated additionally to the borrowers belonging to small farmers. The borrowers under small farmers category have reported 1.18 percent rise in employment generation, while the borrowers belonging to marginal farmers and medium farmers have recorded 11.23 and 13.79 percent rise respectively. The variation in self employment generation of the borrowers belonging to agricultural labourers is only statistically significant at 5 percent level.

**Table 6.12: Farm-size-wise Classification of Self Employment Position in two Selected villages under Rajganj Block.**

Farm size	No. of borrowers	Mean self-employment pre-loan	Mean self-employment post loan	Difference in employment	Percent change in employment	't' value
SF	25	6.76	6.84	0.08	1.18	0.092**
MF	13	6.50	7.23	0.73	11.23	0.822**
MF*	8	7.25	8.25	1.00	13.79	0.921**
AL	7	5.43	7.71	2.28	4.99	3.053*

\* Significant at 0.05 level

\*\* Not significant

Source : Sample Survey, 2006-07

But from the ANOVA results we see that the variations in self employment generation in two selected villages are equal to all land size groups as the calculated value of F(viz. 2.401) is less than the table value (2.60) at 5 percent level of significance. Hence the employment generation has also been created at an uniform rate among all farm size groups after availing the credit in two selected village under Rajganj block .

**Table6.13: ANOVA Results**

Sources of variation	df	MS	F
Between groups	3	387013.47	2.401
Within groups	49	1493686.89	

Source : Sample Data,2006-07

### **6.2.3: A Detailed Statement of Additional Employment Generation of Different Farm sizes in the District.**

A detailed picture relating to the farm-size wise employment position of the borrowers is presented in table 6.14. It can be seen that additional employment has invariably been generated among all categories of borrowers. In the post loan period the average annual increase in self employment per borrower works out to be the highest for medium farmers (2.3 months) followed by agricultural labourers (1.979 months), marginal farmers (0.805 months) respectively. The table also shows that the percentage of increase in employment generation is the highest for medium farmers (37.40 percent). The percentages increase in employment generation for agricultural labourers and marginal farmers are 34.05 percent and 20.56 percent respectively, but the lowest increase is recorded for small farmers (13.33 percent).

**Table 6.14 : Farm Size-wise Classification of Annual Employment  
Position of Sample Borrowers**

Farm size	No. borrowers	Mean self-employment pre-loan	Mean self-employment post-loan	Difference in employment	Percent change in employment
AL	24	5.8125	7.7917	1.979	34.05
SF	64	6.0391	6.8437	0.805	13.33
MF	52	6.22115	7.50	1.279	20.56
MF*	20	6.15	8.45	2.3	37.40

Source: Sample Survey, 2006-07

The dispersion of employment ( in months) among the size groups of borrowers as measured by SD and CV is shown in table 6.15

The table shows that both SD and CV have decreased from the pre-loan period to post-loan period for all size groups of farmers. The table further shows that variability in months of work is the least among the borrowers belonging to medium farmers and the variability is large among the sample borrowers belonging to small farmers in the post-loan period.

**Table 6.15: Co-efficient of Variations (CV) and Standard Deviations(SD) Among the Size Groups**

Farm size	SD		CV	
	Pre-loan period	Post-loan Period	Pre-loan Period	Post-loan Period
SF	3.132	2.929	51.86	42.80
MF	3.380	3.196	54.33	42.61
MF*	3.100	2.781	50.40	32.91
AL	3.602	3.007	61.97	38.59

Source: Sample Data, 2006-07

To test the variations in the self employment of the borrowers of different land holding groups, t test has been applied. The data on this aspect have presented in table 6.16

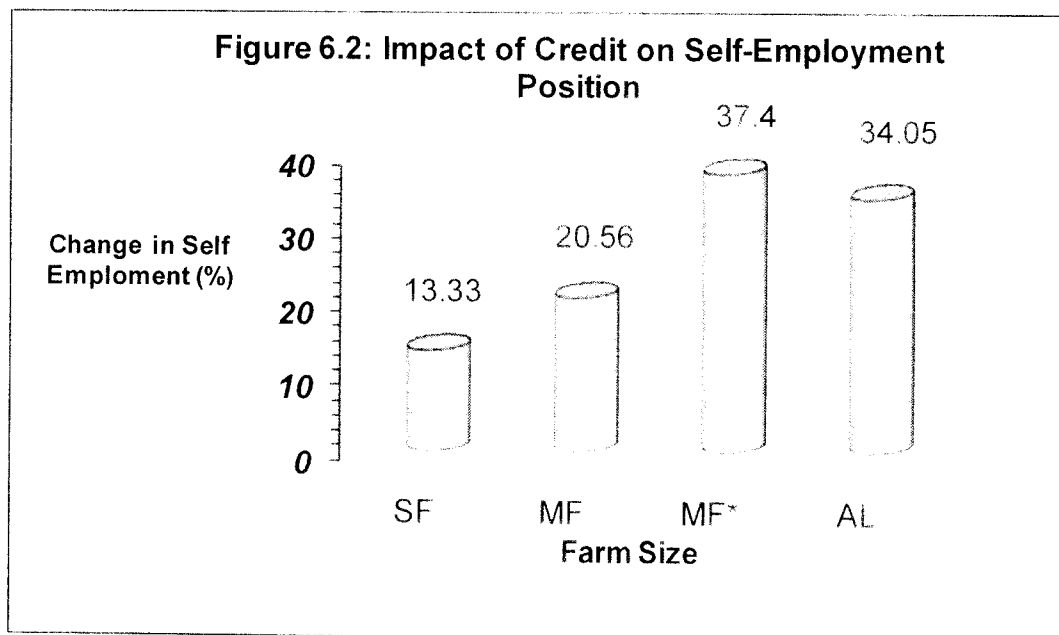
**Table 6.16: Variation in Self-employment Position of Farm Size Groups**

Farm size	AL	SF	MF	MF*
Mean difference	1.979	0.805	1.279	2.3
Standard deviation(SD)	3.62	3.92	4.45	3.63
t statistics	2.679*	1.643**	2.074*	2.835*

\*Significant at 5 percent level

\*\* Not significant

The table 6.16 shows that there is significant difference in self employment of the sample borrowers between pre-loan and post-loan periods except the borrowers under small farmer category at 5 percent level. The diagrammatic presentation of the impact of credit on self employment position of the different farm sizes is given in figure 6.2.



The above analysis indicates that the bank finance extended to the rural poor has a little favourable impact on the employment pattern of the borrowers. The supply of credit has enabled the borrowers to generate an additional employment marginally to the tune of 1.322 months a year indicating 21.75 percent increase over the pre loan period. In the matter of additional self employment generation during post loan period, the borrowers belonging to medium farmers in Maynaguri block have benefited significantly. This may be the outcome of proper utilisation of credit. But the borrowers belonging to agricultural labourers both in Jalpaiguri sadar and in Rajganj block are better placed in the generation of self-employment. This may be due to the fact that majority of them are engaged in agricultural works throughout the year and also they concentrate more on loan-based activity. Among the different farm size groups we find that the borrowers belonging to medium farmers and agricultural labourers are better placed in the matter of self-employment generation in the district.

### **6.3 Impact of Credit on Income Generation**

The aim of the bank finance issued to the rural poor is to remove poverty through generation of additional income opportunity and the resultant improvement in the standard of living. One of the main objectives of the present study is to find out the impact of loans on the income of the sample borrowers.

To assess the benefits derived by the borrowers, they were requested to supply informations relating to the net income obtained from the activity for which the loan was sanctioned at two points of time, viz., pre-loan and post-loan periods.

### 6.3.1 : Net Income from the Loan Based Activity

The mean income in the pre-loan and post-loan periods, difference in income and percentage change in income are presented in table 6.17. It can be seen from the table that average annual income from the activity has increased from Rs.641.875 in the pre-loan period to Rs.770 in the post loan period resulting an increase in income of Rs.128.13 representing 19.96 percent increase over the pre-loan period. The overall increase of 19.96 percent in borrowers' net income appears to be insignificant. It is revealed from the table 6.17 that the calculated value of 't'(1.237) is less than the table value(1.96) at 5 percent level of significance. It is thus inferred that the net income from the loan based activity of the borrowers in the pre-loan period does not differ from the net income in the post-loan period.

**Table 6.17 : Income from the Loan Based Activity**

No. of Borrowers	Mean pre-loan income	Mean Post-loan income	Difference in income	Percent change in income	't' value
160	641.875	770.00	128.13	19.96	1.237**

Note : \*\* Not significant at 5% level of significance

Source : Sample Survey, 2006-07

Block-wise classification of income from the loan based activity presented in table 6.18. reveals that the borrowers in all selected blocks have earned incremental incomes at the commencement of the post-loan period. Block-wise classification further shows that the highest mean incremental income from the loan-based activity is recorded in Maynaguri block (Rs.218.87) and the lowest in Rajganj block (Rs.30.19). The percentage of increase in income over the pre-loan period also varies from a high of 29.87 percent in Maynaguri block to 24.01 percent in Jalpaiguri sadar and to a low of 4.78 percent in

Rajganj block. The difference is not statistically significant in all the selected villages under three blocks. Now in order to compare the variability in annual income in selected villages after availing the credit co-efficient of variations are analysed. From the table 6.19 it is clear that CV is high in Rajganj block followed by Jalpaiguri sadar and Maynaguri block respectively. Hence the disparity in annual net income in the post loan period is higher in Rajganj block than in Jalpaiguri sadar and Maynaguri block respectively.

**Table 6.18: Classification of Income from the Loan Based Activity in the Selected Villages Under Different Blocks**

(in Rs)

Block	Mean Pre-loan income	Mean Post-loan income	Difference in income	Percent change in income	't' value
<u>Maynaguri</u> Bhelbhela & Husludanga	732.68	950.94	218.87	29.87	1.576**
<u>Jalpaiguri</u> Choudhury Para & Danguajhar	562.96	698.15	135.19	24.01	0.623**
<u>Rajganj</u> Kaluarbari & Mogha Para	632.08	662.26	30.19	4.78	0.173**

\*\* Not significant at 5% level of significance

Source: Sample Survey, 2006-07

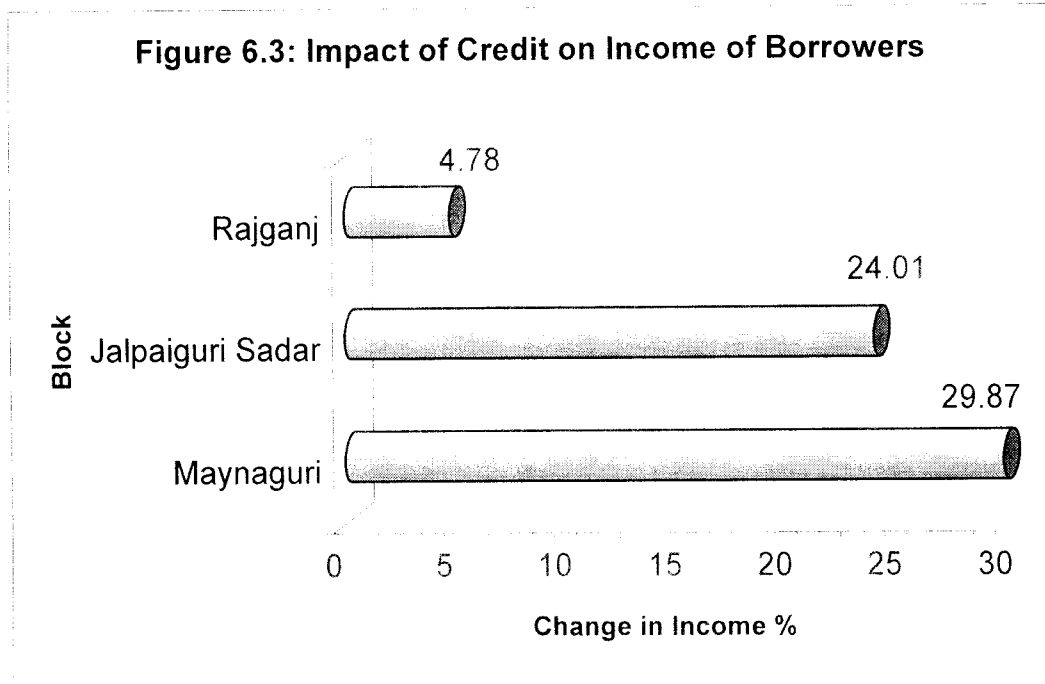


**Table 6.19 : Co-efficient of Variations (CV) Among the Selected Villages under Different Blocks**

Block	CV before Scheme	CV after Scheme
<u>Maynaguri</u> Bhelbhela & Husludanga	123.24	118.52
<u>Jalpaiguri sadar</u> Choudhuri Para & Danguajhar	175.62	158.27
<u>Rajganj</u> Kaluarbari & Mogha Para	145.23	158.98

Source: Sample Data, 2006-07

In order to test the variations of income among the villages under different blocks, one-way ANOVA has been used and the results are presented in table 6.20. As the calculated value is less than table value at 5 percent level of significance the null hypothesis namely that there is no significant difference in income among the selected villages is accepted. Thus it can be inferred from the table 6.20 that the income in the post-loan period does not differ from the income in the pre-loan period. The block-wise impact of credit on income of borrowers is presented in figure 6.3.



**Table 6.20: ANOVA Results**

Source of variation	df	Sum of squares	Mean of squares	F value
Between Group	2	947459.2	473729.58	0.274**
Within Group	157	2.72E+08	1731566.74	

\*\* Not significant at 5% level of significance.

$H_0$  : accepted.

### 6.3.2: Detailed statement of Additional Income Generation by Different Categories of Borrowers

The farm size-wise classification of income of the borrowers in the pre-loan and post-loan periods is presented in table 6.21. It is apparent from the table that the highest incremental income (Rs.1100) as well as percentage increase in income (100.46) are recorded in the case of borrowers under medium farmer category. It is also clear that the impact of loan provided to the rural poor under agricultural labourer, small farmer and marginal farmer categories is not appreciable as the data indicate a negative growth rate of money

income in the post loan period over the pre-loan period. As the calculated value of 't' (3.123) is greater than the table value (1.96) at 5 percent level, the difference is statistically significant only in the case of borrowers of medium farmers.

**Table 6.21 : Farm-Size-Wise Classification of Income from the Loan Based Activity in Selected Blocks.**

(in Rs)

Farm size	No of Borrowers	Mean Pre-loan income	Mean Post-loan income	Difference in income	Percent change in income	't' value
1.AL	24	429.17	416.67	-12.50	-2.91	-0.068
2.SF	64	515.38	511.54	-15.63	-3.03	-0.102
3.MF	52	682.81	667.19	-3.85	-0.56	-0.021
4.MF*	20	1095.00	2195.00	1100.00	100.46	3.123*

\*Significant at 5 percent level

Source: Sample Survey, 2006-07

**Table 6.22: Co-efficient of Variations Among Different Farm Sizes**

Farm size	CV in the pre-loan period	CV in the post loan period
SF	182.17	182.86
MF	140.93	129.71
MF*	95.62	39.43
AL	146.32	181.77

Source: Sample Data, 2006-07

The table 6.22 reveals that variability in annual income is the least in the case of borrowers belonging to medium farmers category and the highest in the case of borrowers belonging to small farmers category in the post loan period. We can further observe from the table that CV has been decreased to 39.62 percent (after scheme) from 95.62 percent in the case of medium farmers and in the case of marginal

farmers it has been also decreased to 129.71 percent (in the post loan period) from 140.93 percent. It means that variability has decreased after the scheme only in the case of marginal and medium farmers respectively.

Now to test the equality of mean incomes generation among farm sizes, one way ANOVA has been applied here. The results are presented in table 6.23.

From the table it is clear that the calculated value of F is greater than the table value at 5 percent level of significance, the null hypothesis namely that there is no significant difference of mean incomes among the farm sizes is rejected and the alternative hypothesis is accepted. Thus the bank finance has altered the income of different farm groups.

**Table 6.23: ANOVA Results.**

Sources of Variation	Sum of squares	df	Mean Square	F
Between Groups	21593581.73	3	7197860.58	4.470
Within Groups	251209855.77	156	1610319.59	

\*Significant at 5 percent level.

Since F ratio in ANOVA of data is Significant at the given level, Post Hoc Test as described by Bonferroni has been used to identify the group(s) contributing to the significant result.

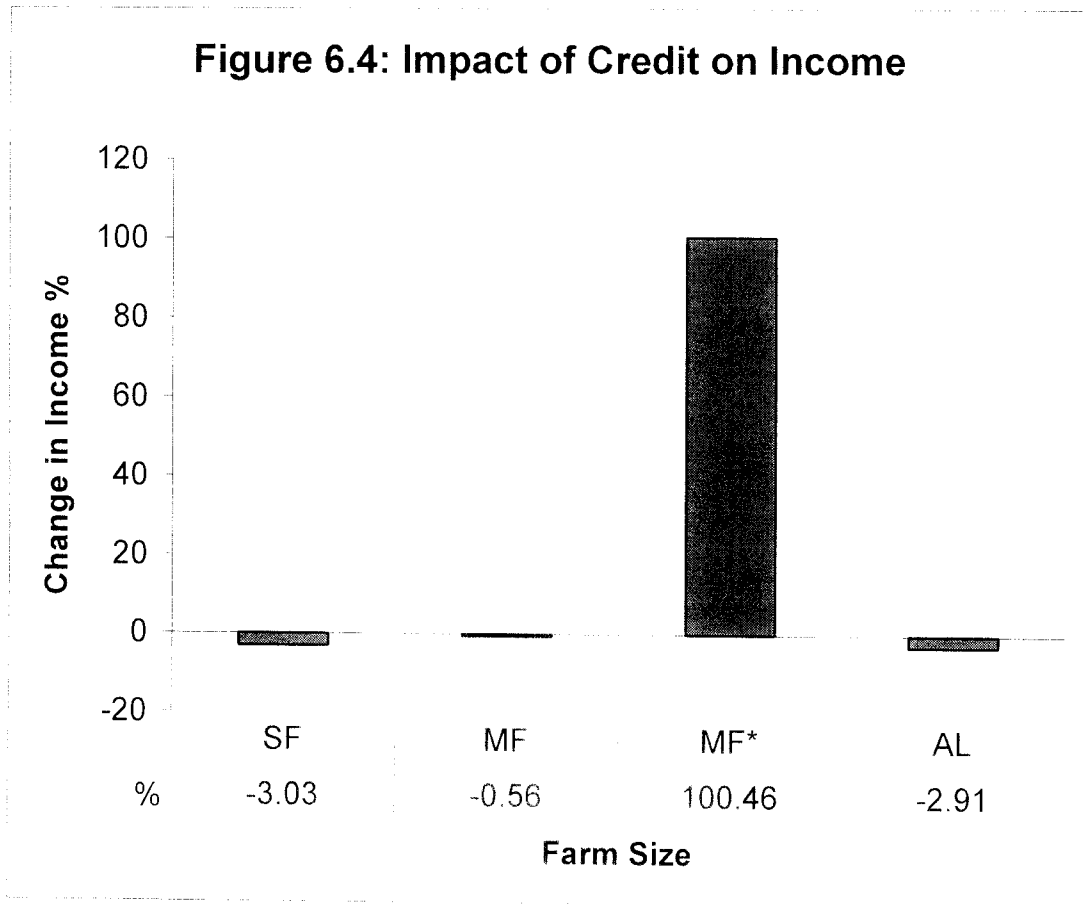
**Table 6.24 : Comparison for Testing Significance contributed by Land Holding Groups.**

Group	Mean	N
1.	-12.50	24
2.	-15.63	64
3.	-3.85	52
4.	1100	20

Contrast pair	Mean Difference	SE	Significance
A (1-2)	3.13	303.740	1.000
B (1-3)	-8.65	313.152	1.000
C (1-4)	-1112.50*	384.204	0.026
D (2-3)	-11.78	296.915	1.000
E (2-4)	-1115.63*	325.080	0.05
F (3-4)	-1683.46*	333.42	.000

\* Significant at the 0.05 level.

Here the contrast pairs C, E and F are significant at 5 percent level indicating that group of medium farmers is different in the sample groups. The diagrammatic presentation of the impact of credit on income of farm sizes is given in fig 6.4.



### 6.3.3 Block-wise Analysis of the Income Generation of Different Farm Sizes

Block-wise analysis of the income generation by different farm sizes is presented in table 6.25.

The table reveals that the income generation is negative for small farmer category in the selected villages under Maynaguri and Rajganj blocks but the income generation in the post-loan period is positive only in Jalpaiguri sadar. The mean incremental income of small farmers from the loan based activity in Jalpaiguri sadar is recorded at Rs.147.06 representing 24.27 percent increase over the pre-loan period.

**Table 6.25 : Classification of Mean incomes of Different Categories of Farm-size in Selected Blocks.**

( in Rs)

Block	Farm size			
	SF	MF	MF*	AL
<u>Maynaguri</u> Bhelbhela & Husludanga				
Before scheme	872.73	262.50	1983.33	388.89
After scheme	822.73	750.00	2583.33	533.33
Difference in income	-50 (-5.73)	487.50 (185.71)	600.00 (30.25)	144.44 (37.14)
t statistics	0.224	2.27*	1.024	0.543
<u>Jalpaiguri sadar</u> Choudhuri para & Denguajhar				
Before scheme	605.88	595.65	500	425
After scheme	752.94	391.30	2116.67	712.50
Difference in income	147.06 (24.27)	-204.35 (-34.31)	1616.67 (323.33)	287.50 (-5.88)
t- statistic	0.391	0.595	2.633*	0.0614
<u>Rajganj</u> Kaluarbari & Moghapara				
Before scheme	568	462.50	1166.67	377.78
After scheme	472	350.00	2616.67	377.78
Difference in income	-96 (-16.90)	-112.5 (24.32)	1450 (124.28)	-155.56 (-41.18)
t-statistic	0.412	0.828	1.718	0.685

Note : Figures in parentheses indicate percentage change

\* Significant at 0.05 level

Source : Sample Survey, 2006-07

The income generation of marginal farmers is positive in the post-loan period only in Maynaguri block. The mean incremental income in this case is Rs.487.50 indicating a 185.71 percent rise over the average income in the pre-loan period. The income generation is positive only in the case of medium farmers in all selected villages under three blocks. The mean incremental income is the highest in respect of sample borrowers belonging to medium farmers in Jalpaiguri sadar (Rs. 1616.67) and it is the lowest in the case of medium farmers in Maynaguri block (Rs. 600). The mean incremental income of medium farmers in Rajganj block is Rs.1450. The percentage of increase in income over the pre-loan period also varies from a high of 323.33 percent in Jalpaiguri sadar block to 124.28 percent in Rajganj block and to a low of 30.25 percent in Maynaguri block. Similarly, the agricultural labourers are better placed in augmenting their income only in Maynaguri block. The borrowers under agricultural labourer category have received higher incremental income representing 37.14 percent rise over the pre-loan period.

In Maynaguri block, the rate of increase in income of the borrowers belonging to marginal farmers is as high as 185.71 percent and the calculated value of  $t(2.27)$  is higher than the table value at 5 percent level of significance, hence this difference in income is statistically significant. In Jalpaiguri sadar the mean incremental income of the borrowers belonging to medium farmers is the highest and the calculated value of  $t$  is greater than the table value hence this difference is also statistically significant and in Rajganj block differences in income of the borrowers under all categories of farm size groups are not statistically significant.

Thus it may be observed from the table 6.25 that in Maynaguri block the marginal farmers have got the highest incremental income and in Jalpaiguri sadar, the medium farmers have received the highest incremental income. This may be due to credit discipline among the borrowers and also may be due to the much lower levels of income of



these categories in the pre-loan period, which has resulted into a substantial increase in the post loan period. Thus the above situation has conclusively showed that the bank finance has a favorable impact only on the level of income of the beneficiaries belonging to marginal farmers and medium farmers in Jalpaiguri and Maynaguri blocks respectively. But in general the impact of credit on income does not present an encouraging result in the district. The survey reveals that borrowers have not augmented their mean incomes from the loan based activity by a reasonably good margin (19.96 percent) over the pre-loan period. The average income from the loan based activity has increased by Rs 128.13 over the pre-loan period. The borrowers in Maynaguri block have recorded the highest incremental income representing only 29.87 percent increase over the pre-loan period. The farm-size wise analysis shows that borrowers under medium farmers are better placed in augmenting their income levels, representing 100.46 percent rise over the pre-loan period. The high percentage of income accruing to the borrowers belonging to medium farmer category may be due to credit discipline among them and also the use of more inputs in production pattern which have increased the productivity. It may also be observed that in Jalpaiguri sadar small farmers have got the highest incremental income and they have got the lowest incremental income in Rajganj block. In Maynaguri block marginal farmers have got the highest incremental income and have received the lowest incremental income in Jalpaiguri sadar. While in Jalpaiguri sadar medium farmers have received the highest incremental income and they have got the lowest incremental income in Maynaguri block. Similarly the agricultural labourers have received the highest incremental income in Jalpaiguri sadar and have received the lowest in Rajganj block. Thus it is clear that there exists inter-block inequality in income even after the implementation of schemes.

#### 6.4 Impact of Credit on Standard of Living

The main focus of economic planning is to raise the living standards of people who are living particularly below the poverty line<sup>2</sup>. The Regional Rural Banks (RRBs) were set up in 1975 with the objective of financing the credit requirements exclusively to the poorer sections. These RRBs can form the ideal institutional pattern to act as the agents of economic and social changes because they can bring these poorer sections within a common fold. The RRBs by providing adequate credit facilities to small and marginal farmers on liberal terms are playing a significant role in removing poverty and in raising living standard of the people<sup>3</sup>.

This present section aims to find out the impact of credit on the living standard of the borrowers after availing the credit. The variables considered for analysis here are clothing, education to children, development of houses and recreational facilities such as use of T.V. In this context three terms have been used in this analysis. These are : not improved, slightly improved and improved

In order to measure the improvement in the living standard the sample borrowers were asked to supply informations regarding above four variables and three code numbers are assigned to the three terms. A weight of 1 is given for not improved while a weight of 2 is given for slightly improved and a weight of 3 is given for improved. All these code numbers are added and the scores upto and inclusive of four are considered as indicative of not improved in standard of living. If the scores are between 5 to 11, it is assumed that living standard has slightly improved and if the score is 12 it is assumed that the standard of living of the borrowers has improved. Here "chi-square" test has been used to test the significance of variations between the selected villages and farm-sizes under different blocks .

It is clear from table 6.26 that there is no a significant change in the living standard of the borrowers in the study area. Only 9.38

percent of the borrowers have stated that their living standards have improved after availing credit. About 20.62 percent of the borrowers have reported that their standard of living have changed slightly while majority of the borrowers

**Table 6.26: Impact of Loans on Standard of Living of Sample Borrowers**

Standard of Living	No of Borrowers	Percent to total
1. No improvement	112	70.00
2. Slightly improved	33	20.62
3. Improved	15	9.38
Total	160	100

Source : Interview Responses

i.e, 70 percent of them have stated that they experience no increase in their living standard in the post-loan period.

A close look at table 6.27 ( village-wise classification) indicates that the analysis does not present encouraging results as only about 28.30 percent of the borrowers in the selected villages under Maynaguri block have experienced enhancement in their living standard, the corresponding percentages in Jalpaiguri sadar and Rajganj block are 18.52 percent and 15.09 percent respectively.

**Table 6.27 : Classification of Impact of Loan on the Standard of Living in the Selected Villages under Different Blocks**

Standard of Living	<u>Maynaguri Block</u> Churabhandar and Husludanga (Combined )	<u>Jalpaiguri sadar</u> Choudhuri Para and Denguajhar (Combined )	<u>Rajganj Block</u> Kaluarbari and Mogha Para (Combined )	Total
No improvement	30(56.61)	40(74.07)	42(79.24)	112(70)
Slightly improved	15(28.30)	10(18.52)	8(15.09)	33(20.62)
Improved	8(15.09)	4(7.41)	3(5.67)	15(9.38)
Total	53(100)	54(100)	53(100)	160(100)

$\chi^2 = 7.402, df=4$

Figures in brackets represent the percentage of each item to row total.

Source : Interview Responses

From the table it is clear that 15.09 percent of the borrowers in Maynaguri block, 7.41 Percent borrowers in Jalpaiguri sadar and about 5.67 Percent borrowers under Rajganj block have a clear increase in their living standards as compared to pre-loan period. As the calculated value of Chi-square (7.402) is less than the critical value (9.48), the village wise variations do not seem to exist any real difference in standard of living. The village-wise analysis reveals that the borrowers in the selected villages under Maynaguri block are better placed in improving the standard of living.

Farm size wise impact of credit on the living standard is presented in table 6.28. The table shows that significant difference only exists in the increase in living standard of the borrowers under medium farmers. In the case of medium farmers only 40 percent of the sample respondents have reported an increase in their living standard after availing credit.

**Table 6.28 : Category-wise Classification of Impact of Loans on the Standard of Living**

Standard of Living	Farm size				Total
	SF	MF	MF*	AL	
Not Improved	48(75)	39(75)	9(45)	16(66.67)	112(70)
Slightly Improved	10(15.62)	9(17.31)	8(40)	6(25)	33(20.62)
Improved	6(9.38)	4(7.69)	3(15)	2(8.33)	15(9.38)
Total	64(100)	52(100)	20(100)	24(100)	160(100)

$\chi^2=14.94$ ;  $df=9$ , Critical value at 5% level = 16.919

Figures in the brackets indicate the percentage of each item to row total.

Source : Interview Responses

But those borrowers whose standard of living have improved significantly constitute only 15 percent of the borrowers belonging to medium farmers followed by small farmers (9.38 percent), agricultural labourers (8.33 percent) and marginal farmers (7.69 percent) respectively.

The Chi-square ( $\chi^2$ ) test shows that  $\chi^2$  (observed)  $<$   $\chi^2_{0.05, 9}$  and hence at 5% level of significance  $H_0$ (null hypothesis) is accepted. Hence there does not seem to exist any difference in standard of living of different farm groups after availing the credit.

From the foregoing analysis on the impact of credit on standard of living it can be concluded that the credit disbursed by the UBKGB has not a positive impact on the living standard of the sample borrowers.

On the standard of living of the sample respondents it is observed that about 70 percent borrowers do not observe any increase in their living standard after availing loans. From village-wise analysis we see that more than 50 percent borrowers in two villages under Maynaguri block and more than 70 percent of borrowers in other four villages under two blocks have reported that they experience no increase at all in their standard of living since availing themselves of credit facilities. Similarly the category-wise classification reveals that majority of the borrowers belonging to small farmers, marginal farmers and agricultural labourers do not observe a definite improvement in their living standard in the selected villages. The study reveals that the provision of bank finance helps generate additional employment marginally in the district. The present study reveals that there is a 21.75 percent increase in self-employment on an average during the period subjected to study. As regard self-employment generation in the six selected villages, the borrowers of two villages (combined) under Maynaguri block (34.27 percent) have recorded benefit compared to other four villages under Jalpaiguri sadar and Rajganj block

respectively. We also see that the borrowers belonging to medium farmers (37.40 percent) are better placed in regard to employment generation.

The impact of credit on net income of the borrowers indicates that on an average the borrowers have augmented his net annual income from the loan-based activity by a small margin of 19.96 percent compared to pre-loan period. Among the six selected villages, the borrowers of two selected villages namely Bhalbhala and Husludanga under Maynaguri block have the highest increase in net income (29.87 percent) in the post-loan period. Among the farm-sizes the borrowers belonging to medium farmers only have the highest net income (100.46 percent) in the post loan period.

Thus the impact of credit on the standard of living does not present encouraging results. 70 percent of borrowers have experienced no improvement in their standard of living after utilisation of credit. In this regard only 9.38 percent of borrowers in six selected villages have a clear increase in their standard of living as compared to pre-assistance period. From category-wise classification we see that only the borrowers under medium farmers have shown somewhat improvement (55 percent) in their standard of living after availing credit. Hence the hypothesis that "there is no significant improvement in self-employment, income and standard of living of the borrowers" is accepted.

### **Notes and References**

1. Raja Rao , “Impact of the RRBs on Income and Employment of Weaker Sections”, *Kurukshetra*, July 1996.
2. Dr. Benson Kunjukunju and Dr. S. Mohanan, *Institutional Finance and Rural Development*, New Century Publications, New Delhi, 2002.
3. Bhupal Singh Negi, *Co-operative Credit and Regional Development*, Deep and Deep Publications, New Delhi, 1990.