CHAPTER - 3

EXPENDITURE ANALYSIS

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3.01 Introduction

A realistic assessment of the credit needs of the lower strata of society under the DRI scheme is possible only when the size of the beneficiaries' operating expenditure in pursuing a particular economic activity, is known. The main purpose of this Chapter, therefore, is to enquire into :

(i) the structure and size of the operating expenditure required to be incurred by the beneficiaries engaged in different activities,

(ii) the size of the Net Investible Amount (NIA) available to the beneficiaries for long-term investment/purchase of fixed assets, and

(iii) the relationship between the size of expenditure with the scale of their operations under different economic activities.

3.02 It may be understood at the outset that the beneficiaries are supposed to meet both the total operating expenses/costs and the investment needs for acquiring the required assets out of the total amount of loan sanctioned to them by the financing institutions. Once the size of

operating expenses required to be met to undertake the different economic activities under the scheme is known, it should become easier for the financing institutions to estimate the financial needs of the beneficiaries more realistically by adding the required operating expenses to the amount required for acquiring/creating the assets to pursue the desired activity.

3.03 The existing stock of knowledge on the implementation of DRI scheme does not provide any firm clue about the relationship between the changes in the size of operational expenditure/costs and the scale of operations or the total loan amount required. This knowledge, based on empirical analysis, should be a good base equipping the financing institutions with greater understanding about the behaviour of the operating expenses/costs and total funds required/scale of operation, which in turn, will enable them to revise the limits/loan amounts in view of the impact of the price changes in the economy on the operating costs of identified activities.

3.04 In view of the above, the analysis in this Chapter is directed towards estimating :

(i) the operating cost,

(ii) the Net Investible Amounts available to the beneficiaries, and

(iii) the relationships between the changes in the operating expenses/costs and the total amount of loan (required to pursue the economic activities under different scales of operations).

3.05 For the purpose of analysis, data on operating expenditure/costs has been collected directly from the beneficiaries selected for field investigation, and to determine the scale of operations, the data regarding the loan amount disbursed to the beneficiaries has been collected from the financing institutions. Further, for the purpose of analysis the operating expenses have been bi-furcated into (i) Debt servicing cost, and (ii) Operating expenses/costs. Both these costs have been taken as independent variable. The 'Debt Servicing Cost' is derived from the rate of interest charged by the financing institutions on the loan disbursed, which being a policy variable, is independent of the scale of operation or the size of loan amount disbursed. Also, the operating expenses/costs calculated at the minimum level are independent of the scale of operation or the loan amount in respect of different activities, and as such have been taken as an independent variable. However, the upward changes in the size of operating expenses are bound to increase the loan amount required to pursue the activity and as such the scale of operation derived by the loan amount

disbursed has been taken as a 'dependent variable'.

3.06 Operating Cost Analysis (Aggregate Level) :

Analysis of data presented in Table 3-1 indicates that during the period under reference, the total operating expenses/costs varied between Rs. 86,605 to Rs. 34,709, and in this the dominance of the operating expenses has been substantial as compared to the servicing cost at the aggregate level.

TABLE 3-1

LEVEL OF TOTAL OPERATING EXPENDITURE (AGGREGATE)

Year	Scale of Operation (Loans Disbursed)	Total Expenditure	Of which	Operating Expenses	Servicing Cost	Total Expenses (As percentage of total Loan)	Operating Expenses (As percentage of total Loan)	Servicing Cost (As percentage of total Loan)
	Rs.	Rs.		Rs.	Rs.			
1978	2,47,006	74,035		63,205	10,830	29.97	25.59	4.38
1979	3,44,968	86,605		72,097	14,508	25.10	20.89	4.21
1980	1,27,475	34,709		28,526	6,183	27.22	22.37	4.85
1981	1,57,286	36,247		29,460	6,787	23.04	18.73	4.31
Total	8,76,735	2,31,596		1,93,288	38,308	26.42	22.05	4.37

In view of the higher incidence of the operating expenses/cost, in terms of percentages, its contribution to the total cost has been also highest at 22.05. It may be pointed out that the total cost as percentage of the total loan represented at around 27, in which the incidence of the servicing cost has been very low at 4.37 per cent only (Appendix-Table 3-1).

3.07 Rural Sector[1]:

Analysis of data presented in Table 3-2 for the rural sector indicates that the expenses incurred on the operational aspect by the beneficiaries has been Rs. 71,368, and for the servicing cost has been Rs. 30,295.

TABLE 3-2

LEVEL OF TOTAL OPERATING EXPENDITURE (RURAL SECTOR)

Year	Scale of Operation	Total Expenditure	Of which	Operational Expenses	Servicing Cost	Total Expenses (As percentage of total Loan)	Operational Expenses	Servicing Cost
	Rs.	Rs.		Rs.	Rs.			
1978	1,73,726	25,733		18,265	7,468	14.81	10.51	4.30
1979	2,83,953	35,186		23,582	11,604	12.39	8.30	4.09
1980	1,05,065	15,277		9,991	5,286	14.54	9.51	5.03
1981	1,36,042	25,467		19,530	5,937	18.29	14.35	4.36
Total	6,98,786	1,01,663		71,368	30,295	14.55	10.21	4.34

1. The words sector and activities are synonymous with each other all through this study.

3.08 Thus, the total expenditure incurred has been reckoned at Rs. 1,01,663. Analysis of data further indicates that the total expenses, as percentages of the total loan represented at 14 per cent, in which the contribution from the operational expenses/cost has been highest at 10 per cent. The incidence of the servicing cost has been very low at 4.34 per cent only (Appendix-Table 3-2). This can be attributed to early and timely repayment of loans by the rural beneficiaries.

3.09 Urban Sector :

Analysis of data given in Table 3-3 indicates that the total expenditure incurred by the beneficiaries in the urban sector has been highest at Rs. 1,29,933 as compared to the rural sector . It may be mentioned here that the

TABLE 3-3

LEVEL OF TOTAL OPERATING EXPENDITURE (URBAN SECTOR)

Year	Scale of Operation (Loans Disbursed)	Total Expenditure	Of which	Operating Expenses	Servicing Cost	Total Expenditure (As percentage of total Loan)	Operating Expenses	Servicing Cost
	Rs.	Rs.		Rs.	Rs.			
1978	73,280	48,302		44,940	3,362	65.91	61.32	4.59
1979	61,015	51,419		48,515	2,904	84.27	79.51	4.76
1980	22,410	19,432		18,535	897	86.72	82.72	4.00
1981	21,244	10,780		9,930	850	50.74	46.74	4.00
Total	1,77,949	1,29,933		1,21,920	8,013	73.01	68.51	4.50

coverage of beneficiaries in the total sample was 29 per cent only and the loan amount disbursed was represented at 20 per cetn of the total. Analysis of data further indicates that in the total expenditure, the incidence of the operating expenses has been high at Rs.1,21,920 as compared to the rural sector. As a percentage of the total loan disbursed, the total expenditure represented at 73 per cent has been quite substantial. The incidence of the servicing cost though, has been low at 4.50 per cent only, it was higher as compared with the aggregate level (4.37 per cent) and the rural sector (4.34 per cent) respectively. The incidence of higher servicing cost in this sector has been on account of non-repayment of the loans timely by the beneficiaries as compared to the rural sector (Appendix-Table 3-3).

3.10 Activity-wise Analysis

It can be seen from Appendix-Table 3-4 that the total cost as a percentage of the total loan disbursed varied between 28 per cent to 5 per cent[2] under different

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2. The lowest operating expenses under sheep-rearing have been due to discontinuance of activity before the terminal period by some beneficiaries and the open grazing facilities available to the beneficiaries for their sheep on the virgin lands owned by the State Government.

fourteen activities selected in the rural sector. The highest has been under agriculture activity (28 per cent) and the lowest has been under sheep-rearing activity (5 per cent). In this total cost the incidence of the operating expenses has been highest which on an average represented at 14 per cent. The highest incidence of the operating expenses has been again reflected under agriculture activity at 24 per cent (Appendix-Table 3-4 and 3-5) and the lowest has been under sheep-rearing activity at almost 2 per cent. In the urban sector, the activity-wise analysis depicts that among the five activities selected, the total cost varied between 80 per cent to 20 per cent, and the highest has been under the vending cloth activity (80 per cent), and the lowest has been under the Vending glasswares activity at (20 per cent) respectively. The higher incidence of the operating expenses has been again reflected under the vending cloth activity at 76 per cent and the lowest has been depicted under the vending glasswares activity at 5 per cent only. On an average, incidence of the operating expenses in the urban sector has been at around 68 per cent which has been higher as compared to the rural sector where it has been reckoned at 10 per cent only.

3,11 Net Investible Funds/Amount Analysis :

The DRI scheme has been a policy variable with certain definitive objectives which have been discussed earlier. Any analysis of the expenditure will have an influence on this policy. We have already analysed the total cost structure/the total expenditure incurred by the beneficiaries. For the purpose of analysis here, we will confine to the efficiency level emanating from the point of view of the net investible funds generated for fixed capital investment, on account of the expenditure incurred by the beneficiaries. It can be seen from Table 3-4 that at the aggregate level the net investible funds available for the fixed investments has been Rs. 6,45,139; in the rural sector Rs. 5,97,123, and in the urban sector Rs. 48,016, respectively (Appendix-Tables 3-6 to 3-9).

TABLE 3-4

GENERATION OF NET INVESTIBLE FUNDS AT AGGREGATE, RURAL AND URBAN LEVEL

Year	Aggregate Level	Rural Sector	Urban Sector	Aggregate (As percentage of the total loan)	Rural Sector	Urban Sector
	Rs.	Rs.	Rs.			
1978	1,72,971	1,47,993	24,978	70.03	85.45	34.09
1979	2,58,363	2,48,767	9,596	74.90	87.61	15.73
1980	92,766	89,788	2,978	72.78	85.46	13.28
1981	1,21,039	1,10,575	10,464	76.96	81.29	49.26
Total	6,45,139	5,97,123	48,016	73.58	85.45	26.99

3.12 Analysis of data further indicates that the net investible funds available for fixed investment at the aggregate level of the total loan, in terms of percentage has been at 73, whereas for the rural sector 85 and for the urban sector at around 27 only. This indicates the amounts/funds in the urban sector as compared to the rural sector has been comparatively low, and this has been on account of higher incidence of the total expenditure involved in pursuing economic activities in this sector.

3.13 Activity-wise Analysis (NIF) :

From the data provided in Appendix-Table 3-6, it can be seen that the availability of net investible funds varied from activity to activity in rural sector. Among the fourteen activities selected, it varied from 94 per cent - the highest to 76 per cent - the lowest. This in other words means, that under sheep-rearing (94 per cent) net investible funds/amounts were available for creating fixed assets, whereas under Pan bidi (76 per cent) that can be invested in the fixed assets only. Similarly, in the urban sector, it varied from 79 per cent (vending glasswares) to 20 per cent (vending cloth) under the five selected activities. This can be interpreted that under vending glasswares - 79 per cent - has been available for creating fixed assets, whereas under vending cloth only

20 per cent has been available for investment in the term assets (Appendix-Table 3-9).

3.14 Relationship between operating costs and scale of operations (Regression Analysis)

To examine the relationship between the operating costs and the scale of operations a cross section analysis of the data has been attempted by using regression analysis to help us presage empirically about the relationship between the size of expenditure and the scale of operations or the loan amounts. The analysis has adopted the following schemata namely, at the first stage, it is devoted to the aggregate picture which is comprised of urban as well as rural sectors covering all the nineteen activities. Here, we have run equations under Linear and Double Log - specifications for 1 to 19 activities. At the next stage, we have analysed the rural sector covering activities 1 to 14. Here, again we have run both the specifications - Linear and Double Log. It may be repeated here once again that at the aggregate level the analysis concentrates on the total loan which has been taken as a basis of the scale of operations and total expenditure for all the years selected from 1978 to 1981. At the next stage, more as an aid to comparing the shifts of relationship across the period, we have also

analysed the data at the dis-aggregate level, i.e., separately for the year 1978 and 1981. Here, we have run Linear specifications only. It may be mentioned that in view of the less number of activities covered in the urban sector, the inferences for this sector are drawn on the basis of results obtained at the aggregate and in rural levels. The following notations have been used throughout this analysis.

LA = Loan Amount

TE = Total Expenditure

OE = Operational Expenses

SC = Servicing Cost

CE = Consumption Expenditure

TOEB = Total operational expenses plus servicing cost incurred by the beneficiaries

3.15 (I) Aggregate Level

Here, we have analysed the influence of two variables separately namely, servicing cost, and operational expenses on the loan amount for all the nineteen activities at the aggregate level.

(a) All Activities (Rural + Urban 1 to 19)

$$LA = -1087.66 + \underset{(16.15)}{21.58^{*}}\ SC + \underset{(5.86)}{0.39^{*}}$$

$$\text{Elasticity} = \qquad (0.8946) \qquad (0.1289)$$

$$\bar{R}^2 = 0.966 \qquad \ldots \qquad \ldots \qquad (1)$$

$$\text{Log } LA = 2.23 + \underset{(9.37)}{0.92^{*}}\ SC + \underset{(2.91)}{0.17^{*}}\ \log OE$$

$$\bar{R}^2 = 0.926 \qquad \ldots \qquad \ldots \qquad (2)$$

3.16 Where $\bar{R}^2$ is the co-efficient of determination adjusted for the degrees of freedom. All through this Chapter, an asterisk (*) over the co-efficients indicate that they are significant at the 5 per cent level. The figures in paranthesis are 't' values of the co-efficients. Equations (1 and 2) above try to estimate the relationships involving the servicing cost as well as of the operating expenses, as the independent variable and the Loan amount as the dependent variable respectively.

3.17 Both the equations seem to estimate the relationship significantly. In the double log specification, the independent variable accounts for almost 93 per cent of the variation in the dependent variable (LA). Both SC and OE are significant. In the linear formulation of the equation, the result is more or less comparable. The independent variable SC seems to be a better explanatory variable of LA, in both the equations. In the context of the DRI scheme, at the aggregate level, this may be

considered as a pointer to the fact that a positive relationship between LA and the various costs like the SC and OE do exist. However, the point that emerges here is that although, the OE, as a proportion of the total expenses incurred by the beneficiaries, has been higher than that of servicing cost and, in absolute terms also, its role as an explanatory variable of LA seems to be less significant in comparison with the servicing cost.

3.18 (b) Rural activities (1 to 14)

At the rural level, equations (3 and 4) protray a very similar relationship with greater degree of significance compared with the aggregate level. It may be pointed out that the linear equation is relatively better judging from the value of $\bar{R}^2$. SC appear to be a more significant explanatory variable of the changes in the dependent variable (LA).

$$LA = -519.49 + 22.02^{*}\ SC + 0.48^{*}\ OE$$
$$\text{Elasticity} = \qquad (21.04) \qquad (9.15)$$
$$\qquad\qquad\quad (0.8926) \qquad (0.1177)$$

$$\bar{R}^2 = 0.982 \qquad \ldots \qquad \ldots \qquad (3)$$

$$\text{Log } LA = 2.39 + 0.94^{*} \log SC + 0.14^{*} \log OE$$
$$\qquad\qquad\quad (10.85) \qquad (2.56)$$

$$\bar{R}^2 = 0.953 \qquad \ldots \qquad \ldots \qquad (4)$$

3.19 (c) All Activities (Rural and Urban)

Here, we have analysed the total combined influence of the servicing cost plus operational expenses incurred by the beneficiaries, covering all the nineteen activities, both in the rural and urban sectors, with the loan amount. Equations (5 and 6) try to estimate the relationship between LA and TOEB.

$$LA = 31242.46 + \underset{(3.32)}{1.23^{*}}\ TOEB$$

Elasticity = (0.3229)

$$\bar{R}^2 = 0.393 \qquad \ldots \qquad \ldots \qquad (5)$$

3.20 It has come out with a result which underscores what we have discussed in equations (1 and 2) earlier.

$$\text{Log } LA = 3.80 + \underset{(6.0)}{0.75^{*}}\ \log TOEB$$

$$\bar{R}^2 = 0.681 \qquad \ldots \qquad \ldots \qquad (6)$$

3.21 $TOEB^3$ accounts for roughly 68 per cent of the variance in LA in the log equation but in the linear equation the value is much less. It may be pointed out

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3. TOEB may be defined as a combination of SC + OE incurred together by the beneficiaries.

that the positive association between the total combined expenses to the beneficiaries and the LA is significant in the log specification, but as revealed earlier, cost element separately explained in the equations (1 and 2), the variation of LA is more significant. It may thus, be observed that the operational expenses are more prominent in terms of magnitude in the total expenditure structure but it is less influential to loan amount variations.

3.22 (d) Rural Activities

Here, we have analysed the influence of the combined costs namely, the servicing cost and the operational expenses, on the loan amount for all the fourteen activities in the rural sector.

At the rural level, both the equations (7 and 8), given below, have come out with a result that is comparable to that obtaining at the aggregate level, referred to earlier.

$$LA = 15759.6 + \underset{(6.22)}{4.79^{*}}\ TOEB$$

Elasticity = (0.6842)

$$\bar{R}^2 = 0.763 \quad \ldots \quad \ldots \quad (7)$$

$$\text{Log } LA = 2.77 + \underset{(6.41)}{0.91^{*}}\ \log TOEB$$

$$\bar{R}^2 = 0.774 \quad \ldots \quad \ldots \quad (8)$$

3.23 (e) All Activities (Rural and Urban 1-19)

To study the influence of various components of cost elements separately, in equations (9 to 16), we have considered SC and OE individually as independent variables to explain the changes in LAs. Equations (9 and 10) indicates that 89 per cent of the variation in LA (for all the nineteen activities) is accounted for by the level of SC, in both formulations. However, in the rural sector, about 93 per cent of the loan amount is explained by the variations of SC as revealed by the log equation (12). In the linear formulation, the value explained is about 86 per cent of the variation of the loan amount (11).

$$LA = -2005.84 + \underset{(12.31)}{25.17^{*}}\ SC$$

Elasticity = (0.1434)

$$\bar{R}^2 = 0.899 \quad \ldots \quad \ldots \quad (9)$$

$$\text{Log } LA = 2.35 + \underset{(11.94)}{1.09^{*}}\ SC$$

$$\bar{R}^2 = 0.893 \quad \ldots \quad \ldots \quad (10)$$

3.24 (f) Rural Activity

For the rural sector, equations (11 and 12), have estimated the same relationships, works out to be as

under :

$$LA. = 218.14 + \underset{(8.66)}{24.56^{*}}\ SC$$

$$\text{Elasticity} = \underset{(0.9956)}{\quad}$$

$$\bar{R}^2 = 0.861 \qquad \ldots \qquad \ldots \qquad (11)$$

$$\text{Log } LA = 2.59 + \underset{(12.73)}{1.07^{*}}\ \log SC$$

$$\bar{R}^2 = 0.931 \qquad \ldots \qquad \ldots \qquad (12)$$

3.25 (g) <u>All Activities (Rural and Urban)</u>

Similar to the above equations, OE, another component of expense incurred by the beneficiaries has been considered as an independent variable to explain the variation of the loan amounts in equations (13 and 16). It may be observed that, both in all the nineteen activities, and the Rural activities (fourteen), OE has influenced loan amount relatively less as compared with the influence of the servicing cost, either in the linear or log specifications.

$$LA = 32676.58 + \underset{(3.69)}{0.87^{*}}\ OE$$

$$\text{Elasticity} = \underset{(0.2918)}{\quad}$$

$$\bar{R}^2 = 0.446 \qquad \ldots \qquad \ldots \qquad (13)$$

$$\text{Log } LA = 6.00 + 0.51^{*} \log OE$$

$$\bar{R}^2 = 0.549 \qquad \ldots \qquad \ldots \qquad (14)$$

3.26 The analysis of the results obtained by the above equations indicate that the operational expenses hitherto have less bearing on the loan amount disbursed under the DRI scheme. Since the objective of the scheme is to uplift the economic level of the poorest among the poor, it is suggested that in deciding the loan amount to these beneficiaries the potential operational expenses of the assets created out of the loan need to be considered as a part and parcel of the loan amount disbursed by the financing institutions. This may help to generate greater net income than what is derived now, and to plough it back for further investment, even after meeting the basic necessaties of life as revealed by our survey.

3.27 (h) Rural Activities

In the light of the observations made above, the equations (15 and 16) for the rural sector

are examined below.

$$LA = 40455.32 + \underset{(2.48)}{0.77^{*}}\ OE$$

Elasticity = (0.1894)

$$\bar{R}^2 = 0.340 \quad \ldots \quad \ldots \quad (15)$$

$$\text{Log } LA = 6.35 + 0.50^{*} \text{ log } OE$$

$$\bar{R}^2 = 0.494 \quad \ldots \quad \ldots \quad (16)$$

3.28 (i) Consuption Expenditure Effect (CE)

Here, we have analysed the influence of the consumption expenditure, by treating it as an independent variable, on the loan amount.

Equations (17 and 18) using consumption expenditure are given below :

$$LA = 18614.47 + \underset{(3.33)}{0.97^{*}}\ CE$$

Elasticity = (0.5966)

$$\bar{R}^2 = 0.394 \quad \ldots \quad \ldots \quad (17)$$

$$\text{Log } LA = 2.93 + 0.74^{*} \text{ log } CE$$

$$\bar{R}^2 = 0.589 \quad \ldots \quad \ldots \quad (18)$$

3.29 At the all - activities - level, the general fit of equation in the linear specification is poor. However, the double log equation is a shade better. It can be interpreted that CE is positively related to LA. This can be interpreted to mean that as the loan amount increases the consumption expenditure also increases. Therefore, in order to make available net investible funds for asset creation, the financing institutions should increase the quantum of loan disbursed to the beneficiaries. They may even consider to increase the quantum of loan amount by disbursing consumption loan along with the regular (production) loan.

3.30 (j) Rural Activities (1 to 14)

At the rural level, the explanatory power of the equations is relatively very low, as revealed in the following equations (19 and 20). This means, at the aggregate level, and more so at the rural level, CE taken singly is not a significant explanatory variable.

$$LA = 2117.94 + 1.86^{*}\ CE \quad (2.13)$$

Elasticity = (0.9575)

$$\bar{R}^2 = 0.275 \qquad \ldots \qquad \ldots \qquad (19)$$

$$\text{Log } LA = 2.56 + 1.29^{*} \log \quad (3.19)$$

$$\bar{R}^2 = 0.548 \qquad \ldots \qquad \ldots \qquad (20)$$

3.31 Looking at the results obtained for all the activities and in the rural activities, it may be pointed out that the influence of CE in the urban sector may at best be similar.

3.32 (k) <u>All Activities - Total Expenditure (TE)</u>

At the all - activities - level, the double log specification is better in terms of its explanatory power, while in the linear specification, the residuals seem to be in the unacceptable region. In both the specifications, the Total Loan and the Total Expenses are positively related. It may be mentioned that the relationship indicates that as the loan amount increases, the total operating expenditure also increases and in view of this, the financing institutions should enhance the quantum of loan disbursed, so that the net investible funds available to the beneficiaries will be adequate.

$$LA = 23193.4 + \underset{(3.45)}{0.57^{*}}\ TE$$

$$\text{Elasticity} = (0.4973)$$

$$\bar{R}^2 = 0.412 \quad \ldots \quad \ldots \quad (21)$$

$$\text{Log } LA = 1.47 + \underset{(6.09)}{0.86^{*}}\ \log TE$$

$$\bar{R}^2 = 0.686 \quad \ldots \quad \ldots \quad (22)$$

3.33 (1) Rural Activities (1 to 14)

$$LA = -8588.68 + \underset{(3.81)}{1.78^{*}}\ TE$$

$$\text{Elasticity} = (1.1720)$$

$$\bar{R}^2 = 0.548 \quad \ldots \quad \ldots \quad (23)$$

$$\text{Log } LA = -3.03 + \underset{(4.31)}{1.31^{*}}\ \log TE$$

$$\bar{R}^2 = 0.608 \quad \ldots \quad \ldots \quad (24)$$

At the rural level, the results are more or less comparable to those at all activities level, and hence, we may assume that at the urban level similar picture may emerge.

3.34 (II) Disaggregative Picture (Initial and Terminal Year)

In this section, as a corollary to the foregoing

analysis of 'All Activities' and 'Rural Activities' as well as 'Urban Activities', concerning loan and cost variables aggregated for all years, we have attempted to draw a comparison between the picture obtaining in 1978 and 1981[4]. In the context of this exercise, the years assume importance since the following comparisons are drawn to examine whether there has been any shifts in the relationships over the period of time. In this exercise the initial period chosen is 1978 and the terminal year is 1981 which is the reference period of the study.

3.35 (a) <u>All Activities (Rural and Urban) (OE and SC)</u>

It may be observed from the equations estimated and given below (25 and 26) that the general fit of the equation for 1981 is better than that of the equations for 1978. Here, servicing cost and operational expenses are considered separately. They are treated as 'independent variables' and loan amount as 'dependent variable'.

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4. It may be mentioned that if the loan is not disbursed in any of the years referred to above, under certain selected activities, the first and the last year for that particular activity is referred to as the initial and terminal years, respectively. However, this was found in a very few activities only.

Year 1978 :

$$LA = -2118.62 + 0.224\ OE + 23.32^{*}\ SC$$
$$\text{(1.36)} \quad \text{(0.99)} \quad \text{(10.56)}$$

Elasticity = (0.0565) (1.1038)

$$\bar{R}^2 = 0.926 \qquad \ldots \qquad \ldots \qquad (25)$$

However, the variation in the elasticities of cost has been observed over the period of years.

Year 1981 :

$$LA = -1160.95^{*} + 0.76\ OE + 21.99^{*}\ SC$$
$$\text{(2.21)} \quad \text{(2.25)} \quad \text{(14.87)}$$

Elasticity = (0.1411) (0.9948)

$$\bar{R}^2 = 0.989 \qquad \ldots \qquad \ldots \qquad (26)$$

Further, it can be interpreted that the elasticity of servicing cost has declined from 1.10 to 0.99 implying thereby that the recovery has been done during a shorter period of time than envisaged.

3.36 (b) All Activities (Rural and Urban) (TOEB)

Here, we have analysed the combined influence of the SC plus OE on the LA. Equations estimated (27 and 28) are given below.

Year 1978 :

$$LA = 6186.63 + 1.79^{*}\ TOEB$$
$$(1.85)\quad (4.48)$$

Elasticity = (0.5318)

$$\bar{R}^2 = 0.514 \qquad \ldots \qquad \ldots \qquad (27)$$

Year 1981 :

$$LA = -383.10 + 4.55^{*}\ TOEB$$
$$(0.24)\ (13.22)$$

Elasticity = (1.0448)

$$\bar{R}^2 = 0.906 \qquad \ldots \qquad \ldots \qquad (28)$$

3.37 The above equations indicate that the elasticity for TOEB has increased markedly from 0.5318 in 1978 to 1.0448 in 1981. The period is marked by increasing significance of the explanatory variable.

3.38 (c) All Activities (Rural and Urban) (SC Only)

Position indicates in the estimated equations (29 and 30) is altogether reverse to what has emerged in equations (27 and 28). Here, the elasticity of SC has fallen, though, marginally from 1.17 in 1978 to 1.13 in 1981. The results obtained by these equations are in conformity with the results obtained by equations (25 and 26).

Year 1978 :

$$LA = -2285.68 + 24.77^{*}\ SC$$
$$(1.47)\quad (15.01)$$

Elasticity = (1.1730)

$$\bar{R}^2 = 0.926 \qquad \ldots \qquad \ldots \qquad (29)$$

Year 1981 :

$$LA = 1132.59 + 25.04^{*}\ SC$$
$$(1.94)\quad (37.54)$$

Elasticity = (1.1326)

$$\bar{R}^2 = 0.987 \qquad \ldots \qquad \ldots \qquad (30)$$

3.39 (d) All Activities (Rural and Urban) (OE only)

Year 1978 :

$$LA = 7216.12^{*} + 1.79^{*}\ OE$$
$$(2.05)\quad (3.91)$$

Elasticity = (0.4539)

$$\bar{R}^2 = 0.442 \qquad \ldots \qquad \ldots \qquad (31)$$

Year 1981 :

$$LA = 63.34 + 5.34^{*}\ OE$$
$$(0.03)\quad (10.47)$$

Elasticity = (0.9926)

$$\bar{R}^2 = 0.858 \qquad \ldots \qquad \ldots \qquad (32)$$

3.40 It can be observed from above equations that the elasticity of OE has increased from 0.4539 in 1978 to 0.9926 in 1981. This is marked by increase in significance of the variables in 1981. It may be observed here that the results obtained in equations (25 and 26) are not in conformity with the results obtained in equations (31 and 32).

3.41 (e) <u>All Activities (Rural and Urban) (Consumption Expenditure)</u>

The estimated results of the equations (33 and 34) given below indicate that the overall improvement in the consumption expenditure elasticity of the loan amount over the period. The value of elasticity has increased from 0.7463 in 1978 to 1.4066 in 1981. It implies that the increased consumption expenditure has not been taken care of in the loan amount sanctioned and disbursed.

<u>Year 1978</u> :

$$LA = \underset{(1.00)}{3352.01} + \underset{(5.16)}{1.08^{*}}\ CE$$

Elasticity = (0.7463)

$$\bar{R}^2 = 0.588 \qquad \ldots \qquad \ldots \qquad (33)$$

Year 1981 :

$$LA = \underset{(2.38)}{-\ 3474.59^{*}} + \underset{(15.48)}{3.19^{*}}\ CE$$

Elasticity = (1.4066)

$$\bar{R}^2 = 0.929 \quad \ldots \quad \ldots \quad (34)$$

3.42 (f) All Activities (Rural and Urban) (Total Expenditure)

Year 1978 :

$$LA = \underset{(1.23)}{3974.41} + \underset{(5.20)}{0.71^{*}}\ TE$$

Elasticity = (0.6992)

$$\bar{R}^2 = 0.592 \quad \ldots \quad \ldots \quad (35)$$

Year 1981 :

$$LA = \underset{(1.97)}{-\ 2630.88^{*}} + \underset{(16.61)}{1.91}\ TE$$

Elasticity = (1.3079)

$$\bar{R}^2 = 0.938 \quad \ldots \quad \ldots \quad (36)$$

It may be pointed out that over the period the loan amount disbursed has increased alongwith the rise in the total expenditure. Moreover, the elasticity of TE has almost doubled by 1981 indicative, perhaps, of the increasing expenditure.

Main Findings and Policy Implications

I. Total Expenditure Aspect

1. Though there is an association between the total operating expenditure and the loan amounts disbursed, the total operational expenditure does not reveal any proportionate relationship with the changes in the total loan amounts disbursed every year. It may be mentioned that the trend indicated in the movements of this relationship in the urban sector is slightly erratic.

2. In the total operating expenditure, the dominance of the operational expenses is high, particularly a higher incidence of the operational expenses is indicated in the urban sector as compared to the rural sector. On an average, the total operating expenditure as a proportion of the total cost has been 22 per cent at the aggregative level. In the rural sector, it is as low as 10 per cent of the total cost. However, in the urban sector, it is as high as 68 per cent of the total cost. The servicing cost namely, the interest element of the loan has been maintained at a fixed low level of 4 per cent per annum in order to reduce the financial burden on the weaker sections of the community could not have the desired effect basically because it formed only an insignificant proportion of the total expenditure incurred by the beneficiaries. However, the marginally higher incidence

of the servicing cost in the urban activities relative to the rural activities is indicative of the incidence of this cost induced due to the non-repayment of the loans by the beneficiaries in time as well as on account of the phasing of the repayment schedule upto 48 months in some cases of beneficiaries under urban activities. This has naturally increased the interest cost element in the urban sector as compared to 12 or 24 months period phased for the beneficiaries under the rural activities.

II. Net Investible Funds Aspect

3. At the aggregate level, the Net Investible resources available for creating newer term assets stood at 73 per cent of the total loan. For the rural activities, it is as high as 86 per cent of the total loan, and for the urban activities, it is relatively low at 27 per cent of the total loan. In view of the lower capital base and the low scale of economic activities pursued by the beneficiaries, the financing institutions ought to take the cognizance of the total operating expenditure incurred by the beneficiaries, in deciding the size of the loans so that adequate funds could be made available to the beneficiaries, thus helping them to pursue an economically viable activity under the scheme.

4. The analysis of activity-wise total operating expenditure, is expected to enable the financing institutions to fix the scale of finance for different activities in the rural as well as in the urban sectors, in tune with the size of this expenditure incurred. Of course, the scale fixed on this basis need to be reviewed and revised, from time to time, by taking the change in the price index, as an indicator to this expenditure size.

III. Activity-wise Variations in Expenditure

5. On the basis of the examination of average loans disbursed to the beneficiaries under various activities, by the financing institutions and also the revelation during the field survey that the loans were fixed on an ad-hoc basis, without undertaking the proper appraisal of the loan requirements of the beneficiaries and the absence of mutual consultation process between the beneficiaries and the financing institutions, may be one of the reasons for low availability of funds for creating term assets.

6. The quantum of total expenditure incurred by the beneficiaries has varied under different activities as per the investigation carried out in this study. Furthermore, due to the sector-wise variations, the wide variations in the total expenditure have been reflected

differently for the rural as well as for the urban activities. Distribution of the total expenditure from activity to activity has also varied due to the differentiations in the servicing cost as well as in the operating expenses incurred by the beneficiaries. This has been on account of the differentiations in the repayment schedule phased differently for the different activities and the variations in the requirements of the operating expenses for the different activities, due to the peculiar nature of each activity covered by the study. The study has reckoned the quantum of the total expenditure incurred by the beneficiaries under different activities which should help the financing institutions to evolve the scale of finance differently for different activities as referred to above. It may be pointed out that the lending under the DRI scheme should be treated by the financing institutions as a commercial proposition[5] rather than considering it as a target fulfilling objective. Our field survey reveals that though, many beneficiaries had requested for the 'composite loan' on commercial grounds, none of the financing institutions covered in this study

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5. The financing institution should not totally abandon their normal banking approach in regard to the lending under the DRI scheme. They should maximise wherever possible the gains under the scheme and bring more and more beneficiaries under the fold of the normal banking practices in due course of time.

have granted the 'composite loan' and thus denied the facility to them though there has been a provision under the scheme. The implications of such a type of lending can be interpreted that the generation of the net income could have been higher than what has been arrived at by the beneficiaries in this study. The higher loan, if the financing institutions would have considered perhaps, the efficacy of the scheme would have been much higher than what it has been observed now.

7. The empirical analysis conducted on a cross section data with using the regression analysis reveals that, though the operational expenses in terms of magnitude have been substantial in the total expenditure incurred by the beneficiaries, its influence on deciding the loan amount is insignificant. The servicing cost though, has been low in absolute terms, in the total expenditure incurred, it has been statistically observed that its influence has been quite significant in loan amount variations. In other words, it can be interpreted that the quantum of the operating expenses incurred by the beneficiaries should be included by the financing institutions in deciding the quantum of the loans and should enable the beneficiaries to have more net investible funds for creating term assets. Therefore, the implications of this analysis are: that the financing

institutions need to consider the requirements of the operating expenses as worked out activity-wise and sector-wise, in this study to make this as a prominent variable for the variations in the loan amounts.

8. Analysis of the consumption expenditure indicates that it is positively related to the loan amounts. In other words, it can be interpreted to indicate that the variations in consumption expenditure is associated with variations in the loans disbursed. Therefore, it can be remarked that as the loan amount increases, the consumption expenditure also increases. Thus, in order to provide higher quantum of loans to the beneficiaries, the financing institutions should also consider some nominal consumption expenditure requirements of the beneficiaries under the scheme so that he will have more net investible funds for creating fixed assets.

9. The equations estimated for the total expenditure and the total loan reveal that they are positively related. In view of this result, it can be interpreted that the changes with loan amounts causes changes in the total expenditure. Thus, the loan size should be determined with respect to the changes in the incidences of total expenditure.

10. Analysis of total operating expenditure activity-wise indicates that the expenditure per rupee of loan incurred by the beneficiaries, is high in the activities, namely, agriculture (28 paise) and is low under sheep-rearing (5 paise) only. The variations in the total operating expenditure in all the fourteen activities covered in the rural sector indicate that the net investible amount for creating fixed assets has varied from activity to activity. Similarly, examination of the five activities selected in the urban sector indicates that the expenditure per rupee of loan, in the context of the total operating expenditure incurred by the beneficiaries, has also varied from activity to activity. Therefore, the overall policy implications are: that the financing institutions have not adopted the proper appraisal method to assess the total loan requirements of the beneficiaries under the different activities covered by the study.