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# Performance of Pacs in Ysr District of Andhra Pradesh

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**ABSTRACT**

*Organisation of institutional credit and its utilisation for farm production has become one of the major planks of agricultural development policy in the developing world. India's experience is not different from that of the rest of the third world. In this paper an attempt has been made to study the dynamics of co-operative credit on the farm economy of the YSR district and thereby its favourable contribution to the financial flows in credit societies. To determine the impact of co-operative credit on yield and income, a comparison has been made between borrowers and non-borrowers of Primary Agricultural Co-operative Societies (PACS).*

*Cost of cultivation, grain production, and gross income per acre are higher for all categories of borrowers than non-borrowers. There is a high degree of positive relationship between farm size and grain production and the correlation co-efficient worked out to 0.99 for borrowers and 0.94 for non-borrowers. Similarly farm size and gross income are positively related for both borrowers (r = 0.99) and non-borrowers (r = 0.98). It can be noticed that there is inequality in the distribution of income among different categories of farmers in both borrowers and non-borrowers. Gini co-efficient calculated for the data, which is (0.42) for non-borrowers is slightly higher than borrowers (0.41). Defaulters to total borrowers and percentage of Non Performing Assets to outstanding increased with the size of holding. The 'r' value is 0.99 for the latter which is higher when compared to the former (0.94). Average amount defaulted increased with the size of holding (r=0.98). There is a skewed distribution in the amount defaulted among different categories of farmers (SKP. 0.72). On the whole this study emphasizes the need for an equitable distribution of governing body membership, extensive rationing of credit, effective monitoring and prompt repayment of loans.*

**KEYWORDS : Borrowers, Defaulters, Grain production, NPAs, Gini-coefficient, Correlation, Yield, etc.**

## 1. BACKDROP

Farm production technology being advocated at present is sophisticated in nature. Besides, it is highly input and labour intensive. It is interdependent on several interrelated practices, each one of which has to be applied rationally in time and in the manner recommended by the extension specialists. Thus, scientific crop - planning has created an unprecedented upsurge in the demand for various types of inputs of production such as high-yielding variety seeds, fertilizers, pesticides, irrigation, threshers, tractors etc., This in turn has created a heavy demand for credit. Agricultural credit thus in a practical sense, is a nucleus of the system of farm operation. It provides a flow to the system averting ruin which would have occurred due to the lack of monetary capacity of a farmer. The Rural Credit Survey Report quotes the French proverb which says that, "credit supports the farmer as the hangman's rope supports the hanged". Adequate and timely credit to the farmer is therefore, vital and indispensable for the rehabilitation and progress of agriculture. Organisation of institutional credit and its utilisation for farm production has become one of the major planks of agricultural development policy in the developing world. India's experience is not different from that of the rest of the third world. In this paper an attempt has been made to study the dynamics of co-operative credit on the farm economy of the YSR district and thereby its favourable contribution to the financial flows in credit societies. To determine the impact of co-operative credit on yield and income, a comparison has been made between borrowers and non-borrowers of Primary Agricultural Co-operative Societies (PACS).

## 2. SAMPLE DESIGN

To cover the wide range of population spread over the district two stage sampling plan was adopted, selection of PACS formed the first stage and selection of borrowers and non-borrowers the second stage. The district is divided into three co-operative divisions. There are 42, 38 and 35 PACS in Rajampet, Kadapa and Jammalamadugu divisions respectively. From each division eight PACS are purposively selected for analyzing the organization and operational issues of PACS in the district. From each division 2 societies are randomly selected for household survey. A list of borrowers and non-borrowers within the jurisdiction of the each of the six societies was prepared and post - stratified into three groups on the basis of land holding viz., small (below 5 acres), medium (5-10 acres) and large farmers (about 10 acres). The size of ultimate sampling is 180 (borrowers 90 + non-borrowers 90) households were selected at the rate of 30 from each society for field investigation and the results are analysed and presented in this paper.

## 3. FINDINGS

### a. Land ownership distribution

There is a high inequality in the distribution of land in the rural economy of YSR district. The average size of the holding of borrowers (8.45 acres) is slightly higher than that of non-borrowers (7.81 acres). The dispersion of land as measured by S.D, C.V and SKP (78.93, 51.89% and 1.45) is higher for the former category than for the latter (42.18, 44.9% and 1.2).

### b. Cropping pattern

Cropping pattern is a function of several internal and external factors. Paddy occupies 64 per cent of the cropped area of the borrowers, and 68 per cent of the cropped area of non-borrowers. There is a greater dependence on paddy by all size groups of borrowers and non- borrowers. There is an inverse relationship between farm size and cropping intensity, and it is stronger in case of non-borrowers (r=-0.97) when compared to borrowers (r= - 0.94).

### c. Asset level and loan size

There is a positive relationship between asset status and debt accumulation, with the 'r' value of 0.98 for borrowers and 0.97 for non- borrowers. The inequality in the distribution of assets and debt among farm categories is measured with the help of Gini-Co-efficient. It is higher for both assets and debt for borrowers (0.43 and 0.32) compared with those of non-borrowers (0.41 and 0.27).

### d. Sources of credit

The share of institutional credit in total current borrowings during 2013-14 was 66 per cent for borrowers and 55 percent for non-borrowers. Among the institutional agencies PACS provided 30 per cent of the credit to the borrowers where as in the case of non-borrowers commercial banks provided 32 per cent of current borrowings. Among the non-institutional agencies moneylenders are the chief sources of credit in both cases. Institutionalization of farm credit does not necessarily ensure an equitable distribution. The 'r' between size

of holdings and institutional credit works out to 0.95 for borrowers and 0.94 for non-borrowers, indicating a stronger relationship between farm size and formal credit for non-borrowers. The dependence of non-borrowing marginal and small farmers on non-institutional agencies is higher than that of their borrowing counterparts. The average amount of borrowing and farm size are positively related (r=0.99). Skewed distribution of co-operative credit is a reflection of inequality in the distribution of land ownership.

**e. Impact of co-operative credit on yield and income**

Details of cost of cultivation, yield and income of sample households are presented in Table 1.

**TABLE 1 : COST OF CULTIVATION, YIELD AND INCOME OF SAMPLE HOUSEHOLDS FROM PADDY CROP : 2013-14**

| Category | Cost of cultivation (per acre in Rs.) | | Grain production per acre in quintals | | Market price (per quintal in Rs.) | | Gross income (per acre in Rs.) | |
|---|---|---|---|---|---|---|---|---|
| | Borrowers | Non-borrowers | Borrowers | Non-borrowers | Borrowers | Non-borrowers | Borrowers | Non-borrowers |
| Small | 3150 | 3125 | 16.25 | 16.00 | 580 | 580 | 9425 | 9280 |
| Medium | 3400 | 3350 | 16.50 | 16.40 | 590 | 590 | 9735 | 9676 |
| Large | 3500 | 3425 | 16.75 | 16.50 | 600 | 600 | 10050 | 9900 |
| All categories | 3325 | 3275 | 16.85 | 16.50 | 585 | 585 | 9750 | 9625 |

Source : Sample data

Cost of cultivation, grain production, and gross income per acre are higher for all categories of borrowers than non-borrowers. Cost of cultivation and gross income tend to increase consistently with the increasing farm size for both the categories. There is a high degree of positive relationship between farm size and grain production and the correlation co-efficient worked out to 0.99 for borrowers and 0.94 for non-borrowers. Similarly farm size and gross income are positively related for both borrowers (r = 0.99) and non-borrowers (r = 0.98).

Student t- test employed to know whether the average of variables differ significantly or not, is applied for the yield and income variables from paddy crop between borrowers and non-borrowers and the results are shown in Table 2.

**TABLE 2**
**RESULT OF t-TEST**

| Category | Yield | | | Income | | |
|---|---|---|---|---|---|---|
| | $\overline{X}_1$ (B) | $\overline{X}_2$ (NB) | 't'-value | $\overline{X}_1$ (B) | $\overline{X}_2$ (NB) | 't'-value |
| Small | 16.25 | 16.00 | 4.63* | 9425 | 9280 | 5.07* |
| Medium | 16.50 | 16.40 | $0.73^{NS}$ | 9735 | 9676 | $0.58^{NS}$ |
| Large | 16.75 | 16.50 | $0.77^{NS}$ | 10050 | 9900 | $1.16^{NS}$ |

Table t-value = 4.604 * Significant at 5% level ** Not significant at 5% level

As the calculated 't' value (4.63) is higher than table value (4.60) in the case of small farmers, the null hypothesis viz., co-operative credit has no significant effect on yield and income is rejected. But in the case of medium and large farmers the null hypothesis is accepted because the calculated 't' values are less than table values.

The above analysis was confined to single crop that is paddy only. There are several other crops which are grown by sample borrowers and non-borrowers, therefore, it is necessary to mention those details. Due to the complications associated with measurement of productivity and the respective prices of commodities, only unit area particulars of cost of cultivation and gross income for all crops and for the different size groups of borrowers and non-borrowers are shown in Table 3.

**TABLE 3**
**COST OF CULTIVATION AND INCOME OF SAMPLE HOUSEHOLDS FROM ALL CROPS: 2013-14**
**(Per acre in Rs.)**

| Category | Borrowers | | Non-Borrowers | |
|---|---|---|---|---|
| | Cost of cultivation | Gross income | cost of cultivation | Gross income |
| Small | 3300 | 9450 | 3200 | 9300 |
| Medium | 3550 | 9850 | 3500 | 9675 |
| Large | 3700 | 10150 | 3575 | 10050 |
| All categories | 3575 | 9875 | 3375 | 9775 |

Source : Sample data

It is evident from Table 3 that there is a positive relationship between farm size and cost of cultivation for both borrowers (r = 0.98) and non-borrowers (r =0.94). Similarly, farm size and gross income are also positively related in the case of borrowers (r = 0.99) and non-borrowers (r = 0.989). Household income consists of farm and non-farm business income. In the present study non-farm business income is excluded due to data limitations. Category - wise distribution of farm income of sample households is shown in Table 4.

**TABLE 4**
**CATEGORY - WISE DISTRIBUTION OF FARM INCOMES OF SAMPLE HOUSEHOLDS ( in Rs.)**

| Category | Borrowers | | Non-Borrowers | |
|---|---|---|---|---|
| | Income | % to total | Income | % to total |
| Small | 445570 | 11.79 | 279930 | 11.74 |
| Medium | 967270 | 25.60 | 609040 | 25.54 |
| Large | 2365460 | 62.61 | 1495440 | 62.72 |
| Total | 3778300 | 100.00 | 2384410 | 100.00 |

Source : Sample data

The distribution of income is more skewed and varied for non-borrowers (skp = 1.73 and cv = 57.63%) than for borrowers (skp = 1.21 and cv 45.51%). It can be noticed from table 5.13 that there is inequality in the distribution of income among different categories of farmers in both borrowers and non-borrowers. Gini co-efficient calculated for the data, which is (0.42) for non-borrowers is slightly higher than borrowers (0.41).

## 4. EXTENT AND CAUSES OF DEFAULT

Out of 90 borrowers, 54 were defaulters. Defaulters to total borrowers and percentage of NPAs to outstanding increased with the size of holding. The 'r' value is 0.99 for the latter which is higher when compared to the former (0.94). Average amount defaulted increased with the size of holding (r=0.98). There is a skewed distribution in the amount defaulted among different categories of farmers (SKP. 0.72). ANOVA results show that there is no significant difference in the distribution of defaulters between different regions and categories. But there is a significant difference between regions in the amount defaulted. However no significant difference is noticed between different categories of farmers in the amount defaulted. Illiteracy, larger size of the family, higher dependency on food crops, lower financial assets and relationship with the managing committee are the socio-economic characteristics of co-operative loan delinquency.

Variability in incomes caused by natural calamities (26 per cent), attitudinal conditions (25 per cent) and misallocation (24 per cent) are the important factors leading to loan delinquency besides defects in credit organisation (13 per cent), defects in farm production (10 per cent) and miscellaneous (2 per cent).

## 5. SUGGESTIONS

The results of t-test indicate that co-operative credit has significant effect on yield and income of small farmers, compared to those of medium and large farmers. The inequality in the distribution of co-operative credit is noticed in the present study. Further, it is observed that the incidence and extent of default is more in large and medium farmers when compared to small farmers. Thus, the enlargement of the membership and extensive rationing of credit is the need of the hour.

It is observed that 50 per cent of default is due to attitudinal conditions and misallocation of funds by large and medium farmers. The lending institutions should strictly monitor the utilization of the loan by frequent visits, so that the loans must be used for the purpose for which they are sanctioned. Proper procedures with suitable repayment schedules should be adopted for the recovery of loans at the time when the farmers sell their produce. Official lenience and political patronage by way of flouting norms in sanction and repayment of loans should be completely eliminated. The State and Central governments should not interfere in the working of the credit institutions and leave them free to grant loans to deserving applicants and suitable action should be taken against defaulters Variability in incomes (26 per cent) and defects in credit organization (13 per cent) call for appropriate reforms for stabilization of farm income by introducing crop insurance and marketing reforms. On the whole this study emphasizes the need for an equitable distribution of governing body membership, extensive rationing of credit, effective monitoring and prompt repayment of loans. Finally, it should be realized that co-operatives have an indispensable role in the sustenance of rural economy, which is the life line of National economy. "Co-operatives have failed, but every effort must be made to make them a success".

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