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## INDEBTEDNESS AMONG THE SMALL AND MARGINAL FARMERS IN PALNADU DISTRICT OF ANDHRA PRADESH

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### ABSTRACT

The main objective of the paper is to analyse the trends and pattern of indebtedness among the marginalized farmers in the study area. The paper is based on the primary data, such data collected from 300 farm households in Palanadu district of Andhra Pradesh. The data concluded that about 80 per cent of farm households are indebted in all the three regions. It can be said that in Sattenapalli region and Gurazalas, both the marginal and small farm household are highly indebted when compared to the farm households in Narasaraopeta. The degree of indebtedness is found to be 5 per cent high in Gurazala when compared to Narasaraopeta and 3 per cent high when compared to Sattenapalli region. The amount of debt on per acre operated and owned area reveals that the amount of debt per acre owned land is high in Sattenapalli region followed by Palnadu and Narasaraopeta. The intra farmers category analysis shows that the total debt per acre of owned land for marginal farm households is Rs. 19,434/- in Narasaraopeta region, it is Rs.31,857/- in Gurazala and Rs. 27,625 /- in Sattenapalli region. In case of small farm households, it is Rs. 31,058/- in Narasaraopeta, Rs. 24599/- in Gurazala and Rs. 36, 157/- in Sattenapalli region. On the whole the high magnitude of indebtedness among marginal farm households is found to be high in Gurazala and among the small farm household it is found in Sattenapalli region. The statistics clearly reveals that income from subsidiary occupations have an inverse relationship with indebtedness as this income increases the capacity to repay loans. The educational level of the farmers has inverse relationship with indebtedness. The regression coefficient for family-size is significant in Gurazala and Narasaraopeta regions. The variable of expenditure on unproductive purposes bears a direct relationship with indebtedness implying an increase in indebtedness with the increase in expenditure on unproductive purposes. Farm-size has a significant positive relationship with indebtedness. This indicates that the capacity of the farmers to take loans increases as the farm-size goes up. The values of R2 are of the order of 0.80, 0.92, and 0.82 in Delta region, Sattenapalli region and Gurazala regions respectively.



**KEYWORDS:** small, marginal farmers, farm size, regression and Indebtedness.

## INTRODUCTION

The agricultural sector, extending over 46 per cent of the total geographical area by making it a vital element for the inclusive and sustainable growth of Indian economy and providing employment to nearly 53 per cent of the population. The facts that approximately 30.5 per cent of the rural population live below poverty line in 2019-20 emphasized the need for high growth rate in agricultural sector. Thus the agricultural sector not only contributes to overall growth of economy but also reduce poverty by providing the employment and food security to the majority of the population in the country. Over the last sixty years the production of food grains has been increased from 52 million tons in 1950-51 to 250 million tons in 2019-2020, at the same time the production of oil seeds also increased from 5 million tons to 28 million tons. India got a third place in terms of production in Paddy, Wheat, Fruits, Cereals, Groundnut and Sugarcane. The share of agriculture and allied sector in gross domestic product declined steadily from 38.8 per cent in 1980-81 to 13.7 per cent in 2019-20. The share of agriculture in total work force also declined from 75.9 per cent in 1961 to 56.4 per cent in 2010-11. The performance of agriculture in the post independence period had been impressive as compared to the pre independence period. The overall performance of agriculture and allied sector had got up to the mark during the period 2001-2011. The low growth in GDP from agriculture during 2001-2011 coupled with higher instability would have lead to more vulnerability and distress among the farming community.

## REVIEW OF LITERATURE

The researcher has reviewed the available literature with a view to broaden the scope and nature of the present study. Further, an attempt is made to synthesize the conclusion, observations and suggestions of the earlier studies on status of small and marginal farmers in the India and Andhra Pradesh.

Kaur and Kaur (2017) made an attempt to analyse the inequalities among rural households in Shri Muksar Sahib District of Punjab. The study revealed that the widespread inequalities prevailed in the rural areas of Shri Muksar Sahib. The Gini coefficient showed the high skewed distribution of income. The concentration of income was noticed more among the farm households as compared to the agricultural labour and all other households. In the case of consumption expenditure, the concentration among the other rural households was higher than that among the farm and agricultural labour households. Gini coefficient also showed a highly skewed distribution of consumption expenditure. There were more inequalities in the distribution of per household consumption expenditure as compared to per capita consumption expenditure of different categories of rural households except other categories. The asset concentration was less in the case of agricultural labour households and more among farm as well as other households. Gini coefficient also indicated highly skewed distribution of per household assets.

Singh et al. (2017b) made an attempt to analyse the extent and distribution of indebtedness among the farmers and agricultural labourers in rural Punjab. The study concluded that about 86 per cent of farming households and slightly more than 80 per cent agricultural labourers were under debt in the state of Punjab. There was positive relationship between farm size and the amount of debt per indebted household and per sampled household. The institutional sources were the most important source of credit in the case of farm households but on the other hand in the case of agricultural labourers the main credit providing sources were the large farmers, relatives, friends etc. The different farm categories had incurred the major proportion of loan at comparatively lower rates of interest than the agricultural labourers who were taking loans at higher rates of interest.

Veerpal Kaur and Ian Singh (2013) in their study, an attempt has been made to analysis the incidence of income and consumption-based poverty prevailing among the different farm-size categories across the districts in the rural areas of Haryana. The study brings out that the incidence of poverty among the different farm-size categories decreases as the level of productivity of the districts increases. The study also revealed that the incidence of consumption-based poverty among the marginal and small farm-size categories across the three districts is slightly less than the incidence of income-based poverty among these categories across the three districts. This study suggested that the minimum support prices of all agricultural commodities fixed on the basis of cost of production and

consumer price indices can help to raise the income level of the farmers. They should also be encouraged to start subsidiary occupations. Necessary land reforms, such as lowering the ceiling level of landholdings, acquiring the surplus land and distributing it among the marginal and small farmers need to be introduced by the government. In conclusion they opinioned that the welfare schemes initiated by the government for the farmers need to be implemented in their true spirit with enthusiasm. Increase in the plan allocation and enlarging the scope of rural specific schemes to cover larger proportion of population can go a long way in improving the economic condition of the farmers in the state is another important suggestion.

### OBJECTIVES AND METHODOLOGY

The Introduction of new techniques in the agricultural sector has provided the means to acquire the capital required to renovate the farm infrastructure besides meeting operational costs. Yet, the small and marginal farmers overpowered by stagnation due to low productivity in consequent to inadequate investment. Besides, they could not adopt new scientific methods and mechanization in their farming activities. Further, as they are economically incapable, the loans they availed to purchase agricultural inputs like seeds, fertilizers, pesticides, etc, are diverted to meet some other personal and social necessities. The new scientific and technology beside mechanization in agriculture deeply attracted these poor peasants towards high standard of living. Consequently the farmers are trapped in the indebtedness. The income and consumption pattern, analyzed in the previous chapter evidently exposed the fact that the hard income earned by the marginal and small farmers is insufficient even to meet their day to day necessities and also they are compelled to borrow loans from various institutional as well as non – institutional agencies. Further, these farmers are not in a position to fulfill the requirements needed for the institutional loans. As they have no other go, these poor farmers are compelled to borrow credit from non – institutional sources to meet their both agricultural as well as domestic expenditures. Consequently they are indebted. So the researcher in this paper has made an effort to assess and analyse the level and magnitude of indebtedness of the marginal and small farmers in Palnadu district of Andhra Pradesh, with an objective to estimate the extent and determinants of indebtedness among the small and marginal farmers. The paper has been made an attempt to estimate and compare the debt position of households of the sample marginal and small farm size categories in Palnadu district of Andhra Pradesh, the intensity of debt that the marginal and small farmers are severed, region wise and source – wise debt, and the different purposes that the sample marginal and small farmers have obtained loans have also been studied.

### RESULTS FROM EMPIRICAL DATA

In this paper analyse the levels of amount borrowed from various sources of institutions, like non institutional sources ( Money lenders, Friends and relatives and etc), institutional sources (Banks, PACS, SHGs, etc), levels of interest rate, utilization of amount are analysed region wise in the study area.

#### Regions and category wise per Acre Amount of Debt

Region wise and farming category wise levels of indebtedness in the study are depicted in the Table-.1. The data shows that 80.14 per cent (117) of farm households are indebted in Andhra Pradesh. In case of Gurazala it is 85.11per cent (80) followed by Sattenapalli region with 82.84 per cent (111). The highest proportion of small farmers (91.18 per cent) is under debt cycle in Gurazala followed by Sattenapalli region (90.32 per cent) and with 78.67 per cent. It is clearly observed that the magnitude of indebtedness is high among small farmers in Gurazala and Sattenapalli regions, while it is high with the marginal farm households in case of Narasaraopeta. On the whole it is observed that more than 80 per cent of marginal and small farm households are indebted.

Among the marginal households, the indebtedness per sampled household ranges between Rs. 42,246/- in Narasaraopeta and Rs.68, 563/- in Gurazala. In case of small households it ranges from Rs. 76,029/- in Narasaraopeta to Rs. 1, 07,078/- in Sattenapalli region .On the whole it can be said that in Sattenapalli region and Gurazalas, both the marginal and small farm household are highly indebted

when compared to the farm households in Delta region. The reason for this highest indebted in three regions is due to high operational costs. This table clearly reveals that more than 80 per cent of farm households are indebted. The degree of indebtedness is found to be 5 per cent high in Gurazala when compared to Narasaraopeta and 3 per cent high when compare to Sattenapalli region.

**Table -1**  
**Level of Debt Among marginal and small farm households in Andhra Pradesh region wise**

Regions	Farming Category	No of Households		Indebted households as percentage of sampled households	Average amount of debt (Rs.)	
		Sampled	Indebted		Per sampled household	Per indebted household
Narasaraopeta	Marginal	71	58	81.69	42246	51715
	Small	75	59	78.67	76029	96647
	Total	146	117	80.14	59600	74373
Gurazala	Marginal	60	49	81.67	68563	83954
	Small	34	31	91.18	79094	86748
	Total	94	80	85.11	72372	85037
Sattenapalli	Marginal	72	55	76.39	56082	73417
	Small	62	56	90.32	107078	118551
	Total	134	111	82.84	79677	96187
Total	Marginal	203	162	79.80	54932	68834
	Small	171	146	85.38	87896	102947
	Total	374	308	82.35	70004	85004

**Source:** Primary Data

**Note:** Figures in parenthesis indicates per cent to the respective total

#### Region wise - Per Acre amount of debt

Region -wise per Acre Amount of Debt is presented in Table-2. The table reveals that the amount of loan per operated acre is highest (Rs.23,953) in Sattenapalli region followed by Gurazala (Rs. 22,810) and Narasaraopeta (Rs. 18,673). The intra farming category analysis shows that in Coastal Andhra region the total debt per operated acre among marginal farm households is Rs. 19,501/- and it is Rs. 17,888/- among small farm households

In case of Gurazala, it is Rs 28,175/- for marginal farm households and Rs. 13,342/- for small farm households. In case of Sattenapalli region, it is Rs. 26,304 /- for marginal farmers and Rs. 21,223/- for small farmers. The high magnitude of indebtedness among marginal farm household is found in Gurazala. In case of small farm households the high magnitude of indebtedness is found in Sattenapalli region. The table reveals that the amount of debt per acre owned land is highest (Rs. 31,623/-) in Sattenapalli region followed by Palnadu (Rs. 29,254/-) and Narasaraopeta (Rs. 25,495).

The intra farmers category analysis shows that the total debt per acre of owned land for marginal farm households is Rs. 19,434/- in Delta region, Rs.31,857/- in Gurazala and Rs. 27,625 /- in Sattenapalli region. In case of small farm households it is Rs. 31,058/- in Narasaraopeta, Rs. 24599/- in Gurazala and Rs. 36, 157 in Sattenapalli region. On the whole it is understood that the high magnitude of indebtedness among marginal farm households is found in Gurazala and in case of among the small farm households it is found in Sattenapalli region.

**Table - 2**  
**Per acre amount of Debt Region wise**

Regions	Farming Category	Total debt per Owned area	Total debt per Operated area
Narasaraopeta	Marginal	19434	19501
	Small	31058	17888
	Total	25495	18673
Gurazala	Marginal	31857	28175
	Small	24599	13342
	Total	29254	22810
Sattenapalli	Marginal	27621	26304
	Small	36151	21223
	Total	31623	23953
Total	Marginal	26090	24478
	Small	31642	18193
	Total	28651	21604

Source: Primary Data

### Determining the indebtedness among the Marginal and Small Farmers

In this regards, the paper has felt that it is essential to analyse the factors associated with indebtedness by employing linear regression to analyse the relative indebtedness of the marginal and small farm households from the selected regions as depicted below.

$$Y = f (X_1, X_2, X_3, X_4, X_5, X_6)$$

Where,

Y = Indebtedness (Rs.)

X<sub>1</sub> = Family-size (number)

X<sub>2</sub> = Ratio of credit from non-institutional sources to that from institutional sources

X<sub>3</sub> = Income from subsidiary occupations (Rs.)

X<sub>4</sub> = Expenditure on unproductive purposes of borrowed fund (Rs.)

X<sub>5</sub> = Educational level of the decision-maker in the family (Dummy)

X<sub>6</sub> = Farm-size (acres)

The results of the tabular and functional analyse are discussed below

In view of determining the variations in the levels and magnitude of indebtedness comprehensively region wise analysis has also been worked out and the consequent results are discussed in this section.

Region wise and farming category wise factors determining the indebtedness in the study area is presented in the Table-3. Among the marginal and small farm-size categories of the farmers when taken together, the contribution of explanatory variables such as the availability of credit from non-institutional sources, income from subsidiary occupations, expenditure on unproductive purposes, educational level, family and farm-size is statistically significant in all the three regions. The regression coefficients for income from subsidiary occupations and educational level of the farmer are negative and statistically significant in all the three regions. This statistics clearly reveals that income from subsidiary occupations have an inverse relationship with indebtedness as this income increases the capacity to repay loans. The educational level of the farmers has inverse relationship with indebtedness. The regression coefficient for family-size is significant in Gurazala and Narasaraopeta regions. The variable of expenditure on unproductive purposes bears a direct relationship with

indebtedness implying an increase in indebtedness with the increase in expenditure on unproductive purposes. Farm-size has a significant positive relationship with indebtedness. This indicates that the capacity of the farmers to take loans increases as the farm-size goes up. The values of R<sup>2</sup> are of the order of 0.80, 0.92, and 0.82 in Narasaraopeta, Sattenapalli region and Gurazala regions respectively.

The intra size analysis clearly shows that the result of regression coefficients of marginal farmers, the coefficients associated with the explanatory variable has registered an expected sign and most of them are found to be significant at ranging one to 10 per cent. The results of regression coefficient indicate that the family size, credit from non-institutional sources and expenditure on unproductive purposes are found to be positive and significant in the three regions. The regression coefficient of other explanatory variables, income from subsidiary occupation and educational status of the farmers has a negative relationship with indebtedness. In Gurazala these variables are significant at one per cent level. The coefficient of multiple determination R<sup>2</sup> values explain that 68 per cent, 76 per cent and 77 per cent variation in the magnitude of indebtedness in the Delta region, Sattenapalli region and Gurazala.

In case of Small farmers explanatory variables such as family size, credit from non institutional sources and expenditure on unproductive purposes is significant in three regions. The regression coefficient for educational level is negative in the three regions is not significant in Delta region. The other variable farm size is positive and it is significant in Narasaraopeta only. The regression coefficient of multi determination that there is explains 75 per cent, 80 per cent and 82 per cent variation in the magnitude of indebtedness in Delta region, Sattenapalli and Gurazala regions.

**Table-3**  
**Factors Determining the Indebtedness among the Small and Marginal farmers: Region wise**

Factors	Narasaraopeta			Sattenapalli			Gurazala		
	Marginal	Small	Total	Marginal	Small	Total	Marginal	Small	Total
Family size	0.6158 (0.54)	0.9634* (0.87)	0.8223 (2.09)	0.4324 (0.30)	0.8679*** (1.97)	0.3743* (0.98)	0.9157 (1.53)	0.7245** (1.22)	0.6059*** (1.25)
Ratio from Non Institutional sources	0.687* (2.02)	1.1048** (2.95)	0.9688* (3.16)	0.544** (1.840)	0.8644*** (2.12)	0.8764* (4.12)	0.741* (1.89)	0.569** (2.10)	0.7942* (2.55)
Income from subsidiary occupation	-0.2288** (1.86)	-0.5281 (2.25)	-1.301** (1.21)	-0.9165* (2.97)	-0.2889*** (3.65)	-0.2015* (4.20)	-0.1037* (2.25)	-0.6822** (3.52)	-0.3106*** (4.32)
Expenditure on unproductive purpose	1.4211*** (1.60)	0.5503** (2.14)	0.9086* (2.95)	0.615* (3.09)	0.8259*** (1.29)	0.4011* (2.29)	0.504** (0.87)	1.128** (1.06)	0.6452*** (1.02)
Education level	-0.8274 (1.96)	-0.23572*** (2.54)	-0.5969* (3.15)	-3.498 (2.47)	-0.2089* (2.89)	-0.7458** (3.15)	-0.5955* (3.15)	-1.7926 (2.98)	-1.4012* (3.70)
farm size	0.8315** (1.26)	0.2314* (0.60)	0.5256** (2.99)	0.2861* (0.55)	0.4012 (1.82)	0.3877* (2.25)	0.1854*** (0.95)	0.5532 (1.42)	0.4258* (2.12)
R square	0.68	0.75	0.83	0.76	0.88	0.91	0.77	0.82	0.79

**Source:** Primary Data

**Note:** Figures in parentheses indicate t-values

\* Significant at one percent

\*\* Significant at 5 percent

\*\*\* Significant at 10 percent

## CONCLUSION

The paper concluded that the data shows that the levels of indebtedness among the marginalized farm household are different agro climatic and revenue areas of Sattenapalli district of Andhra Pradesh. The data clearly shows that about 80 per cent of farm households are indebted in all the three regions of the district. It can be said that both the marginal and small farm household are highly indebted when compared to the farm households in Delta region. The degree of indebtedness is found to be 5 per cent high in Gurazala when compared to Narasaraopeta and 3 percent high when compared to Sattenapalli region.

The amount of debt on per acre operated and owned area reveals that the amount of debt per acre owned land is high in Sattenapalli region followed by Palnadu and Delta region. The intra farmers category analysis shows that the total debt per acre of owned land for marginal farm households is Rs. 19,434/- in Delta region, it is Rs.31,857/- in Gurazala and Rs. 27,625 /- in Sattenapalli region. In case of small farm households, it is Rs. 31,058/- in Narasaraopeta, Rs. 24599/- in Gurazala and Rs. 36, 157/- in Sattenapalli region. On the whole the high magnitude of indebtedness among marginal farm households is found to be high in Gurazala and among the small farm household it is found in Sattenapalli region.

It clearly indicates that almost all the marginal and small farmers depend upon the non-institutional sources due to less availability of loan per acre from institutional sources besides lack of knowledge and illiteracy and further, easy borrowing process with friends and money lenders. The dependency of credit from non-institutional sources is high in Sattenapalli region (62.98 per cent) followed by Gurazala, (54.72 per cent) and Narasaraopeta (41.80). The money lenders provide credit of above 40 per cent of debt to marginal and 35 per cent of debt to small farmers in the three regions. The variable of expenditure on unproductive purposes bears a direct relationship with indebtedness implying an increase in indebtedness with the increase in expenditure on unproductive purposes. Farm-size has a significant positive relationship with indebtedness. This statistics clearly reveals that income from subsidiary occupations have an inverse relationship with indebtedness as this income increases the capacity to repay loans. The educational level of the farmers has inverse relationship with indebtedness. The regression coefficient for family-size is significant in Gurazala and Narasaraopeta regions. The variable of expenditure on unproductive purposes bears a direct relationship with indebtedness implying an increase in indebtedness with the increase in expenditure on unproductive purposes. Farm-size has a significant positive relationship with indebtedness. This indicates that the capacity of the farmers to take loans increases as the farm-size goes up. The values of R<sup>2</sup> are of the order of 0.80, 0.92, and 0.82 in Delta region, Sattenapalli region and Gurazala regions respectively.

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