Factors Affecting the Viability of Tenant Farmers and Tenant Farm Households in Srikakulam District of Andhra Pradesh

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ABSTRACT

The present study is conducted in Srikakulam district of Andhra Pradesh with the objective of factors affecting the viability of tenant farmers and tenant farm households. In the sample of 120 farmers, there are 37 viable farmers and 83 non-viable farmers, the classification is based on the Tendulkar committee criteria *i.e*, the net income of the farmers is above 51,600 is considered as below poverty line. The farmers whose net income per farm is above 51,600 was come under non viable class and above is taken as viable farmers. The average net income per farm of the 120 tenant farmers is Rs6,607 which is very low.Off- farm income,farm expenditure, farm size and domestic expenditure was the major significant factorseffecting the viability of tenant farmers and tenant farm households.Education, family size, farming experience, Debt outstanding and access to credit are the non significant factors.

Key words: *Tenant farmers, Tenant farm households, Viability.*

Indian agriculture is predominantly characterized by small and marginal farmers, growing incidence of tenancy, landlessness, high degree of fragmentation and distribution of operated holdings, which have direct impact on farm production and rural household income. With the increase in migration of owner farmers to urban areas, number of tenant farmers goes on increasing year by year (Birthal and Singh1991).The extent of tenancy reliable estimates suggest that tenancy is quite high, amounting one third of the cultivated land and a large proportion of farmers (Kaul and Pandey 2000).The high dependence of the population on agriculture is one of the main reasons for low size of land holding and for low per-capita income as well as high incidence of poverty among agricultural workers.The rural poor would maximize their family income by way of farming on lease, along with access to other farm, off-farm and non-farm employment opportunities. Improved access to land on lease by the poor would help reduce their poverty and enhance economic and social status.

MATERIALS AND METHODS

Multiple Regression model was employed to analyze the factors determining the viability of farmers in the study area

$$Y = \beta_0 + \beta_i X_{i+\ldots+}\beta_n X_{n+} e$$

where i =1 to n variables

The specific form of multiple regression function including the identified variables is fittedas follows

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + et$$

X_3 = Farming experience(Years)
X_4 = Education (No. of years)
X_5 = Off farm income (Rs)
X_6 = Domestic expenditure (Rs)
X_7 = Farm expenditure (Rs)
X_8 = access to credit (Dummy variable -0,1)
X_9 = Debt outstanding (Rs)
e = error term
β_i = regression coefficients to be estimated (i = 0, 1……..6)
n = 1,2,3,….4,5 representing number of farmers.

RESULTS AND DISCUSSION

To test the viability in the study area viability was calculated by deducting domestic expenditure and debt outstanding from the total income i.e. from crops, dairy, wages, other income from business of the sample farmers. From the table-1it is observed that the average net income of the farmers after deducting family expenditure and debts outstanding the farmers are in very meager surplus i.e. Rs6,607. Without the off farm income i.e. from dairy and wages the net income is negative (Rs-24434), dairy sector plays a major role in compensating the needs of the farmer by providing supplementary income to repay their loans.The above

results are in accordance with results of Chandra (2001) who reported that small farms are not viable unless they are supported with some supplementary income.

Viability of Farms

The distribution of tenant farmers into viable and non-viable classes has been presented in table. The distribution of tenant farmers into viable and non-viable classes based on economic surplus after deducting domestic expenditure and farm expenditure. It is observed that in the sample of 120 farmers, there are 37 viable farmers and 83 non-viable farmers, the classification is based on the Tendulkar committee criteria i.e, the income of the farmers is above 51600 is considered as below poverty line. The farmers whose income is above 51600 was considered as non viable class and above is taken as viable farmers.

Table 1. Farm Income Measures (Average net income from crops, dairy after including off-farm income of farmers in Rs) (n=120)

S.No	Particulars of Tenant Farm Households	Rs/Farm
1	Total Farm Expenditure (A)	43404
2	Total Gross Income (B)	85804
3	Net Farm Income (B-A) = C	42400
4	Off Farm Income (Dairy + Wages) (D)	31041
5	Total Family Income (C+D) = E	73441
6	Family Expenditure (F)	53280
7	Debt Outstanding (G)	13554
8	Average Net Income (E-F-G) = H	6607
9	Net Income Excluding Off Farm Income (C-F-G)	-24,434

Table 2. Viability of farmers based on cropping pattern + Livestock income and Distribution of tenant farmers into viable and non-viable classes

S.No	Source of Income	No. of viable farmers/non viable	Average Net income
1(A)	Rice +Blackgram	4	4550
2(B)	Rice +Sesamum	0	12472
3(C)	Rice + Maize	6	13560
4(D)	Rice +Blackgram + Sesamum	3	15342
5(E)	Rice + Blackgram +Maize	3	23322
6 (F)	Rice +Blackgram+ Livestock (Dairy and poultry)	14	35674
7(G)	Rice +Sesamum+ Livestock (Dairy and poultry)	34	49567
8(H)	Rice + Maize+ Livestock (Dairy and poultry)	19	51458
9 (I)	Rice +Blackgram + Sesamum+ Livestock (Dairy and poultry)	11	53275 (viable)
10(J)	Rice + Blackgram +Maize + Livestock (Dairy and poultry)	26	53783 (viable)
	Total viable farmers (I+J)	37	
	Total Non viable farmers (A+B+C+D+E+F+G+H)	83	

Factors influencing viability of tenant farmers and tenant farm households

The parameters of the multiple linear regression model were estimated and the results are presented in Table-3.

The results revealed that the coefficient of Multiple Determination (R^2) is 0.91. The variables farm size, off farm income is positively significant at one percent level. Domestic expenditure is negatively influencing at 10 percent level. Farm expenditure is negatively influencing at one percent level. Education, family size, farming experience are positively influencing and non significant. Debt outstanding is negatively influencing and access to credit is positively influencing but non significant. The above results are similar with the studies of Raphael and Hannah (2016), Arindam and pravat(2011), Anand(2014), Islam(2014),Onubuogu et. al (2014), Hossain and Maharajan(2016).

Table 3. Results of the Estimated Regression

S.No	Particulars	Coefficients	P value
1	Intercept	-20513	0.126*
2	Educational status	216.8	0.726
3	Farm size	37054	0.000***
4	Family size	2946.51	0.472
5	Domestic expenditure	-0.166	0.199*
6	Farm expenditure	-1.468	0.000***
7	Off farm income	1.012	0.000***
8	Farming experience	373.727	0.709
9	Debt outstanding	-0.564	0.63
10	Access to credit	7460.22	0.209
	Coefficient of Multiple Determination (R^2)	0.91	

***Significant at 1% level of significance;
**Significant at 5% level of significance;
*Significant at 10% level of significance

CONCLUSION

Off- farm income, farm expenditure, farm size and domestic expenditure were the major significant factors effecting the viability of tenant farmers and tenant farm households.

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