



## **Land ownership and Decision Making Pattern of Farm Women: A Field Study in Medak District of Andhra Pradesh, India**

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### **ABSTRACT**

The present study was conducted in Medak district of Andhra Pradesh, India to study and quantify the decision making pattern of the farm women with and without land ownership and to identify the factors which contributed positively and negatively in holding the land ownership with a sample of 50 women having 25 in each group. Results of the study revealed that there was a distinct difference between the two groups of women in decision making pattern. Out of the total 15 identified farm decisions, women with land ownership were more independent in 14 decisions than the women without land ownership with an average difference of 11.2 per cent. Age of the women, their respective village literacy level, individual education level and family size respectively were the factors that played significant role in acquisition of the land ownership in the study area in descending order of magnitude and discriminated between the two groups. It was concluded from the study that the land ownership of the farm women has very clear impact on decision making pattern which denote their empowerment level and confirmed that enhancing the education levels of the farm women and over all literacy rate of the villages is required to improve the percentage share of the land holdings by the farm women for empowerment of women in agriculture.

**Key words :** Decision making pattern, Field study.

A meaningful development of any country is possible only when it includes the stakeholders in their actual proportion of total population; it may be a gender proportion, religion proportion or social class proportion. When it comes to gender proportion, in India larger number of women are involved in agriculture than the men (Suryanarayana et al. 2005) and they were involved in all most all aspects of agriculture starting from crop selection to land preparation, seed selection, sowing, weeding, pest and disease management, harvesting, handling, storage, marketing, processing and selling. These involvement levels vary based on region, farming system, caste, class and stages in family cycle. But this huge female to male ratio and farm decision making and execution by women felt superficial by the society though they contribute equally as men in terms of labour output, management ability and skilful handling of various farm operations.

Decision making pattern of farm women is varied on their land ownership and the land ownership by women is the result of many socio economic, political, cultural and historical factors.

To study the decision making pattern of the women who have land ownership and engaged in agriculture when compared to the women who did not have land ownership and still engaged in agriculture and to identify various factors which are distinguishing between these two groups and to quantify their contribution in discriminating between these two groups the present field study was conducted.

### **MATERIAL AND METHODS**

For the purpose of the present study, two groups of women who were engaged in farming were identified on random basis from Medak district of Andhra Pradesh, a South Indian state. First group was constituted with 25 women who are engaged in farming and having farm land registered in their names and the second group constituted another 25 women who are engaged in farming and without any land ownership. Thus, a sample of 50 women was drawn randomly and collected the required data through interview method with the help of pretested schedules designed for the purpose.

### Decision making pattern of two groups of women

To quantify the decision making pattern of farm women, first 15 prominent farm management decisions practiced in the locality were identified and each sample women was asked to rank the identified farm decision based on her magnitude of impact in finalizing the decision for execution. The ranking was given in the following manner.

Rank 1 = Decision is taken on her own by the sample women.

Rank 2 = Decision is taken jointly with the male counterpart of the family.

Rank 3 = Decision is taken by male members of the family and no role of sample women.

Thus rankings given by 50 women for each farm management decision were recorded and tabulated. From the tabulated data, decision making pattern of the two groups of women were studied using tabular analysis.

### Discriminant function

The discriminant function analysis was carried out to find out the independent variables in distinguishing the two groups which helped in acquiring land ownership and which negatively contributed in the women land ownership process.

The discriminant function used was,

$$L = d_1X_1 + d_2X_2 + d_3X_3 + d_4X_4 + d_5X_5 + d_6X_6 + d_7X_7 + d_8X_8 + d_9X_9$$

Where, L is the dummy variable (1 = Women with land ownership, 2 = Women without land ownership);  $d_1$  to  $d_9$  are the discriminating coefficients; and  $X_1$  to  $X_9$  are discriminating independent variables. The variables considered for discriminant function analysis were;

$X_1$  = Age (in years)

$X_2$  = Education

$X_3$  = Family size

$X_4$  = Social class

$X_5$  = Membership in various social groups (number of groups)

$X_6$  = Farming experience (in years)

$X_7$  = Extent of inherited land to the family (in acres)

$X_8$  = Income from livestock rearing (in rupees)

$X_9$  = Average literacy rate of the village (percentage)

## RESULTS AND DISCUSSION

### Decision making pattern

The average of ranks given to each decision by the sample women based on their level of involvement and the percentage of difference between the two groups for each decision and thus overall decision making pattern of the farm women was explained with the help of the data presented in table 1. In the table, if lower is the average value given for a decision means more is the women's role in decision making and vice versa.

The highest variation with and without land ownership was observed in case of buying and selling of farm land and decision on investing money in non farm sector followed by selection of crops to raise in the season and decision on allotting the amount of land for various crops etc. But, choosing of credit source was dominated by men in case of first group women more than in the second group which was in contrast to all the remaining parameters considered.

Certain farm decisions like decisions on legal matters and local disputes and choosing of credit source, irrespective of land ownership decision making was dominated by male members of the family only and at the same time certain other decisions like number and type of labours to be hired, allotting the capital for each crop, time of sowing *etc.*, were carried out majorly by female members of the family irrespective of the land ownership.

The difference in decision making pattern of the two groups of women was very obvious. The average difference between the first group and second group women was found to be 11.2 per cent (Table 1).

As the scale ranged from 1 to 3, and 1 represents women's complete independence in decision making and 3 represents complete dependency, (Figure 1) it can be observed that more is the decline in the graph towards horizontal axis means more is the freedom enjoyed by women in farm decision making. Thus, very clear discrimination between the two groups was observed.

First group women who own the land were more independent in case of buying and selling of the land (1.68) followed by decisions on investing money in non farm sector (1.72), allotting the amounts of land for various crops (1.72), allotting

Table 1. Decision making pattern of the two groups of women.

S.No.	Farm decision	First group (n = 25)	Second group (n = 25)	Percentage of difference
1.	Selection of crops for the season	1.8	2.28	24
2.	Decision on allotting the amount of land for various crops	1.72	2.16	22
3.	Decision on allotting the capital for each crop	1.76	1.88	6
4.	Time of sowing	1.88	1.92	2
5.	Manures and fertilizers selection	2.16	2.32	8
6.	Decision on number and type of labourers to be hired	1.8	1.84	2
7.	Decision on time and type of harvesting	1.8	2.12	16
8.	Marketing decisions	2.12	2.16	2
9.	Buying new farm implements	2.04	2.12	4
10.	Buying and selling of farm land	1.68	2.28	30
11.	Choosing credit source	2.36	2.28	- 4
12.	Decision on investing money in nonfarm sector	1.72	2.32	30
13.	Children education and marriage decisions	2.04	2.12	4
14.	Attending a social meeting	2	2.36	18
15.	Decisions on legal matters and local disputes	2.36	2.44	4
	Average	1.949	2.173	11.2

Table 2. Discriminant function analysis for two groups of women .

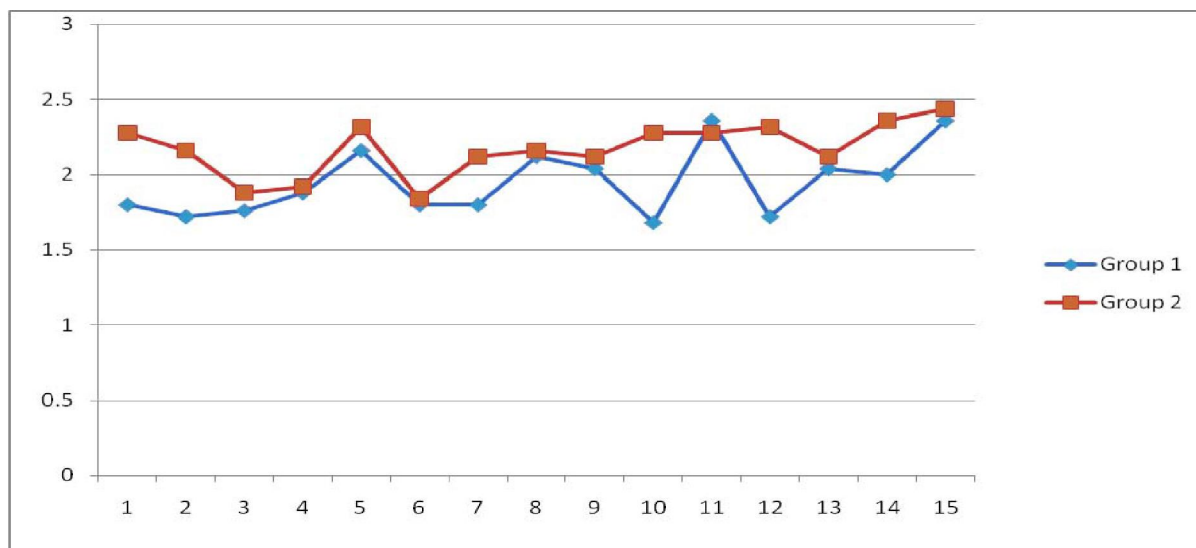
Independent Variables	Mean difference (di)	Discriminant coefficient (Li)	Li X di	Percentage of contribution to the total distance
X <sub>1</sub>	-11.94	-0.2500	2.9856	112.9142
X <sub>2</sub>	-5.11	-0.0839	0.4289	16.2225
X <sub>3</sub>	-1.06	-0.1720	0.1815	6.8651
X <sub>4</sub>	5.72	-0.1479	-0.8465	-32.0129
X <sub>5</sub>	2.78	-0.0815	-0.2264	-8.5604
X <sub>6</sub>	1.83	-0.1093	-0.2004	-7.5798
X <sub>7</sub>	5.87	-0.0375	-0.2198	-8.3126
X <sub>8</sub>	1.74	-0.1204	-0.2101	-7.9450
X <sub>9</sub>	-5.56	-0.1352	0.5712	28.4090
			2.464	100.00

the capital for various crops (1.76) etc. Choosing credit source (2.36), decisions on legal matters and local disputes (2.36) were least influenced by them followed by manures and fertilizers selection (2.16) and marketing decisions (2.12).

Whereas the second group women who were not holding the land ownership have independent decision making pattern in case of

decisions on number and type of labourers to be hired (1.84), decision on allotting capital for each crop (1.88) followed by the time of sowing (1.92). At the same time this group women were least independent in case of decisions on legal matters and local disputes (2.44), attending social meetings (2.36), manures and fertilizers selection (2.32) and decisions on investing money in non farm sector (2.32) etc.

Figure 1. Farm women decision making pattern



Appendix-I : Means and Standard Deviations of the two groups.

S.No	Independent variable	Group – I		Group – II		Mean difference	T value
		Mean	SD	Mean	SD		
1	X <sub>1</sub>	3.6667	3.61	15.6111	19.91	-11.94	1.76
2	X <sub>2</sub>	7.6667	11.08	12.7778	19.45	-5.11	0.65
3	X <sub>3</sub>	14.5000	23.80	15.5556	19.91	-1.06	0.09
4	X <sub>4</sub>	19.0000	19.28	13.2778	15.32	5.72	0.61
5	X <sub>5</sub>	17.6667	24.38	14.8889	22.59	2.78	0.22
6	X <sub>6</sub>	19.8333	26.47	18.0000	30.03	1.83	0.12
7	X <sub>7</sub>	19.3333	25.74	13.4667	22.77	5.87	0.45
8	X <sub>8</sub>	18.0000	25.60	16.2556	24.25	1.74	0.13
9	X <sub>9</sub>	9.3333	14.73	14.8889	23.69	-5.56	0.56

Appendix-II : Pooled var-cov matrix of the two groups.

	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	X <sub>6</sub>	X <sub>7</sub>	X <sub>8</sub>	X <sub>9</sub>
X <sub>1</sub>	249.02	7.93	-132.39	65.50	-32.27	-153.83	-62.85	-116.75	-14.98
X <sub>2</sub>	7.93	279.91	84.85	-102.38	75.32	-44.41	-117.57	-57.85	-71.89
X <sub>3</sub>	-132.39	84.85	461.82	-5.72	-181.42	26.35	-64.01	-193.61	-103.03
X <sub>4</sub>	65.50	-102.38	-5.72	287.43	-35.44	-203.31	27.64	-81.33	-156.52
X <sub>5</sub>	-32.27	75.32	-181.42	-35.44	542.48	219.44	-191.34	-83.72	-114.88
X <sub>6</sub>	-153.83	-44.41	26.35	-203.31	219.44	824.37	207.36	-245.91	-149.90
X <sub>7</sub>	-62.85	-117.57	-64.01	27.64	-191.34	207.36	573.92	131.46	-131.51
X <sub>8</sub>	-116.75	-57.85	-193.61	-81.33	-83.72	-245.91	131.46	614.04	240.00
X <sub>9</sub>	-14.98	-71.89	-103.03	-156.52	-114.88	-149.90	-131.51	240.00	428.79

### Discriminant function analysis

As the levels of differences in decision making pattern of farm women with and without land ownership were quantified, various factors which have contributed in land ownership were studied using discriminant analysis for the same women.

It was revealed that Age ( $X_1$ ) was the foremost discriminant factor between the two groups followed by literacy rate of their respective villages ( $X_9$ ), their education levels ( $X_2$ ) and their family size ( $X_3$ ) in descending order of magnitude respectively with 112.91%, 28.40%, 16.22% and 6.86% (Table 2). Whereas factors which contributed negatively in discriminating between these two groups were social class of the women ( $X_4$ ) followed by membership in various groups ( $X_5$ ), extent of inherited land to the family ( $X_7$ ), income from livestock ( $X_8$ ), and their farming experience ( $X_6$ ) with -32.01%, -8.56%, -8.31%, -7.94% and -7.57% respectively.

Hence, it was confirmed that on an average more is the age of the women in the family more will be the tendency of holding the land ownership followed by their respective village literacy rates, individual education levels and their respective family sizes which were the positively contributed factors in holding land ownership.

### CONCLUSION

It was concluded from the present study that there was a clear cut difference between the women who have land ownership and the women

who do not have land ownership in farm decision making. Out of the 15 identified farm decisions, first group women's leading was observed in 14 farm decisions and on an average 11.2 % of more independence in decision making was enjoyed by the first group women. At the same time, different independent variables which discriminated between these two groups of women were analyzed and found that it was the age of the women followed by their respective village literacy rates, individual education level and their family size were the factors with positive contribution to discriminate between the two groups.

As the land ownership of the farm women has shown definite impact on farm women decision making pattern and as decision making pattern denotes empowerment level (Linberg et al. 2011), it is recommended to take measures to enhance the education levels of the farm women and over all literacy levels of the villages for empowerment of women in agriculture.

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