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## A study on profile characteristics of respondents of techno-economic empowerment through digital extension

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### Abstract

The present study was undertaken with the main objective to study the association between profile characters and the techno-economic empowerment of farmers through digital extension. The study was conducted in Parbhani district of Marathwada region of Maharashtra. In all 120 respondents were selected randomly. The data were collected by personal interview and “Ex-Post-Facto” research design was used for conducting the study. The collected data was processed and statistically analyzed by using statistical tools like frequency and percentage, mean, standard deviation. The analysis of data revealed that majority of respondents (67.50 percent) was belonged to ‘middle’ age group while 32.50 percent of respondents had attained ‘higher secondary’ level of education while majority of the respondents had medium family size and medium family income. In case of land holding 48.33 percent of respondents had small land holding while 63.33 percent of respondents had ‘medium’ social participation. The majority of respondents were having ‘medium’ level of farm power, possession of ICT tools, time spend, decision making and level of aspiration.

**Keywords:** ICT tools, profile, techno-economic, empowerment, digital extension

### Introduction

Agricultural offerings such as agricultural advisories, economic services, agricultural marketing and hazard transfer are required for every agricultural commodity value system (ACVS) of a farmer and India has been blessed with about 400 agricultural commodities value system. Many country wide degree programmes, viz. Digital India 2015, Make in India 2015. Skill India 2015, Startup India 2015 have confirmed operational difficulties for its affect at farm level, farmers level and that too at small and marginal farmers level. India’s digital story is one of an ICT-led development through use of technological know-how that is affordable, inclusive and transformative. The Digital India Programme targets to transform India into a knowledge-based economic system and a digitally empowered society.

The main objective of extension education is to increase farm yields and improve the standard of living of farmers. Extension makes good communications better and progressive. It helps in adoption of innovations. Digital extension technology is a tool to better provide agricultural recommendations to farmers through digital applications. Any digital tool or technology used in the management of decision making process in agriculture referred to as digital extension technologies. Digital tools can offer site-specific management guidelines and integrate large amount of information Techno-economic empowerment refers to control on use of different technologies and also on economic status by enhancing skills, knowledge and access to resources which ultimately improves standard of living in society.

Keeping above fact in view, the present study was designed to analyze the profile of respondents to understand their socio-economic status and mindset with following objective;

1. To study the profile of respondents.

### Methodology

The present study was conducted with the main objective to study the association between profile characters and the techno-economic empowerment of farmers through digital extension. The study was conducted in Parbhani district of Marathwada region of Maharashtra. In all 120 respondents were selected randomly.

The data were collected by personal interview and “Ex-Post-Facto” research design was used for conducting the study. The collected data was processed and statistically analyzed by using statistical tools like frequency percentage, mean, standard deviation and coefficient of correlation. The independent variables were age, education, Family size, land holding, family income, social participation, farm power, possession of ICT tools, time spend, decision making and level of aspiration.

## Results and Discussion

The findings of the present study as well as the relevant the discussion has been summarized under the following heads:

### Profile of the respondents

#### Age

The data regarding age of the respondents is shown in table 1. It is revealed from table 1 that 67.50 per cent of the respondents belongs to the middle age category followed by 20.00 per cent and 17.50 per cent in young age and old age category respectively.

From above data it can be concluded that majority of respondents belong to ‘middle’ age category.

#### Education

The data regarding education of the respondents is shown in table 2. Regarding the education of the respondents it is clear from the table 2 that 32.50 per cent of respondents were educated up to higher secondary school. Whereas, 28.34 per cent respondents were educated up to graduation and 19.16 per cent educated up to secondary school, followed by 15.00 per cent educated up to primary school and only 5.00 per cent were uneducated.

From above data it can be concluded that, nearly more than 90 percent of the respondents were educated to a satisfactory level, which in turn might help them in social mobility and information seeking.

However the efforts should be made to educate the illiterate and school drop-outs through adult education and functional literacy programmes in villages to increase their level of thinking.

#### Family size

The data regarding family size of the respondents is shown in table 3. As regards the family size, it is evident from table that higher percentage 45.84 per cent of respondents had 4 members in their family followed by 34.16 per cent respondents had 5-6 members and 20.00 per cent had 7 and more members in their family.

It is clearly noticed from the above information that most of respondents belonged to small family size.

#### Land holding

The data regarding land holding of the respondents is shown in table 4. As regards the land holding, it is evident from table 4 that 48.00 per cent of the respondents had small land holding followed by 25.83 per cent and 17.50 per cent respondents had marginal and semi-medium land holding respectively. Only 5.83 per cent and 2.51 per cent respondents had medium and large land holding respectively.

It is observed clearly that most of the respondents had small land holding. The possible reason behind this might be either

fragmentation or inherited deviation of land from generation to generation.

#### Family Income

The data regarding family income of the respondents is shown in table 5. As regards to family income table 5 is evident that majority of the respondents 77.50 per cent had medium level of family income followed by 11.66 per cent had low and 10.84 per cent respondents had high family income.

It can be concluded that majority of the respondents had medium family income. The probable reason behind this might be the small land holdings of the respondents.

#### Social participation

The data regarding social participation of the respondents is shown in table 6. It is elucidated from Table that majority 63.33 per cent respondents had medium level social participation, while 23.33 per cent respondents had low social participation and only 13.34 per cent respondents had high level of social participation.

#### Farm power

The data regarding farm power of the respondents is shown in table 7. It is evident from table that majority 40.84 per cent respondents had medium level of farm power followed by 36.66 per cent had high and 22.5 per cent respondents had low level of farm power.

#### Possession of ICT tools

The data regarding possession of ICT tools of the respondents is shown in table 8. It is evident from table that majority 55.01 per cent of respondents had medium level of possession of ICT tools followed by 24.17 per cent had high possession and 20.83 per cent had low possession of ICT tools. It is observed that majority of the respondents had medium possession of ICT tools. The reason behind this might be unawareness about use of ICT tools, poor network connections in village.

#### Time spend

The data regarding time spend of the respondents is shown in table 9. It is evident from table 9 that majority 50 per cent of respondents had medium time spend on ICT tools followed by 32.50 per cent had high and 17.50 per cent had low time spend on ICT tools. It is observed that majority of the respondents had medium time spend on ICT tools for seeking information.

#### Decision making of farmers

The data regarding decision making of the respondents is shown in table 10. Table is evident that majority 56.66 per cent respondents had medium decision making followed by 25.84 per cent had high decision making while, 17.50 per cent respondents had low decision making. It is observed that majority of the respondents had medium decision making.

#### Level of aspiration

The data regarding level of aspiration of the respondents is shown in table 11. Table is evident that majority 60.83 per cent respondents had medium level of aspiration. While, 20.00 per cent and 19.17 per cent had high and low level of aspiration respectively. It is observed that majority of the respondents had medium level of aspiration.

**Table 1:** Distribution of respondents according to their age

Sr. No.	Category	Frequency	Percentage
1	Young (up to 35 years)	24	20.00
2	Middle age (36-50 years)	81	67.50
3	Old age (51 & above years)	15	12.50
Total		120	100.00

**Table 2:** Distribution of respondents according to their education

Sr. No.	Category	Frequency	Percentage
1	Illiterate	18	15.00
2	Primary (1 to 4 std)	6	05.00
3	Secondary (5 to 10 std)	23	19.16
4	Higher Secondary (11 and 12 std)	39	32.50
5	Graduate and above	34	28.34
Total		120	100.00

**Table 3:** Distribution of respondents according to their family size

Sr. No.	Category	Frequency	Percentage
1	Small (up to 4 members)	41	34.16
2	Medium (5-6 members)	55	45.84
3	Large (7 & above members)	24	20.00
Total		120	100.00

Mean=5.26 S.D=1.79

**Table 4:** Distribution of respondents according to their land holding

Sr. No.	Categories	Frequency	Percentage
1	Marginal (up to 1.00)	31	25.83
2	Small (1.01-2.00)	58	48.33
3	Semi-medium (2.01-4.00)	21	17.50
4	Medium (4.01-10.0)	7	05.83
5	Large (10.01 & above)	3	02.51
Total		120	100.00

**Table 5:** Distribution of respondents according to their family income

Sr. No.	Categories	Frequency	Percentage
1	Low (up to 1.57)	14	11.66
2	Medium (1.57-3.50)	93	77.50
3	High (3.51 & above)	13	10.84
Total		120	100.00

Mean=2.53 lakh S.D=0.96

**Table 6:** Distribution of respondents according to their social participation

Sr. No.	Categories	Frequency	Percentage
1	Low (up to 2)	28	23.33
2	Medium (3-4)	76	63.33
3	High (5 & above)	16	13.34
Total		120	100.00

Mean=3.31 S.D=0.97

**Table 7:** Distribution of respondents according to their farm power

Sr. No.	Categories	Frequency	Percentage
1	Low (up to 4)	27	22.50
2	Medium (5 to 7)	49	40.84
3	High (7 & above)	44	36.66
Total		120	100.00

Mean=5.8 S.D=1.81

**Table 8:** Distribution of respondents according to their possession of ICT tools

Sr. No.	Categories	Frequency	Percentage
1	Low (Up to 3)	25	20.83
2	Medium (4-6)	66	55.01
3	High (6 & above)	29	24.17
Total		120	100.00

Mean=4.64 S.D=1.41

**Table 9:** Distribution of respondents according to time spend for information utilization.

Sr. No.	Categories	Frequency	Percentage
1	Low (up to 1)	21	17.50
2	Medium (2-3)	60	50.00
3	High (4 & above)	39	32.50
Total		120	100.00

Mean=2.95 S.D=1.35

**Table 10:** Distribution of respondents according to their decision making

Sr. No.	Categories	Frequency	Percentage
1	Low (Up to 7)	21	17.50
2	Medium (8-10)	68	56.66
3	High (11 & above)	31	25.84
Total		120	100.00

Mean=9.28 S.D=2.10

**Table 11:** Distribution of respondents according to their level of aspiration

Sr. No.	Categories	Frequency	Percentage
1	Low (Up to 15)	23	19.17
2	Medium (16-26)	72	60.83
3	High (27 & above)	25	20.00
Total		120	100.00

Mean=21.35 S.D=5.88

**Implications**

The study has portrayed the profile of the respondents in terms of selected socio-economic and psychological characteristics. The personal and socio-economic and psychological characteristics of respondents may help agriculture development agencies for appropriate planning for empowering farmers.

**Conclusions**

The study found that most respondents had medium levels of education, income, and social participation, indicating a balanced profile in the surveyed area.

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