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Adoption level of information communication technology by the farmer, Satna district of Madhya Pradesh

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Abstract

The present study was carried out Satna district and Majhgawan Block in Satna District of Madhya Pradesh. Random sampling procedure was selected total 120 women. The data were collected by personal interview schedule. The data were analysed using appropriate statistical tools such as: percentage, rank and Chi-Square. It was observed that low adoption level for ICT. Age, land holding, Annual income, occupation, type of family and house type positive and significant whereas Education, caste and social participation and Family type negative and non significant relationship with adoption of ICT.

Keywords: Farmers, ICT, adoption

Introduction

Information and communication technology (ICT) adoption is the process through which people, groups, and societies use technological tools like computers, the internet, and mobile devices to manage and share information. This has resulted in major changes to social, educational, and business systems.

Although there are obstacles such as the requirement for organizational transformation and suitable training, this integration can also boost economic growth, enable new services, improve productivity, and offer creative answers to persistent problems. Ict provide Farmers get timely updates on weather, soil health, crop diseases, pest control, and market prices. ICT connects farmers directly with buyers, traders, and consumers, reducing dependence on middlemen. Mobile apps and ICT tools guide farmers on fertilizer use, irrigation, and seed selection. Reduces wastage and increases productivity. Digital banking, mobile money, and online payment systems make loans, subsidies, and insurance more accessible. Online training, videos, and advisory services improve technical knowledge of modern farming. Encourages adoption of sustainable agriculture. ICT provides alerts on drought, floods, pest attacks, and other risks.

Methodology

The study was conducted in district Satna of M.P. Majhgawaon block were purposively selected for the study. Majhgawa block total 368 villages out of these Paldev, Chobepure, Pindra or Chauraha selected for the study. Thus, The total four village will be selected**.** The total numbers of respondents were 120. Two types of variables were selected for study i.e. independent variable and dependent variable. Independent variables were age, education, occupation, Caste, size of land holding, type of family, type of house, annual income, sources of irrigation, sources of drinking water, extension contact, house type source of information. The dependent variables were knowledge level of ICT. A structured interview schedule was prepared to integrate all the aspects of the study. The respondents were individually contacted through personal interview after establishing rapport with the farmers. The collected data were classified, tabulated and statistically analyzed with the help of percentage, mean score, & chi-square test was applied.

Results and Discussion

Table 1: Distribution of respondents according to their adoption of ICT

S. No.	Activities	Level of Adoption			Mean Score	
		CA	P A	No A		
1	Use Internet	16 (13.33)	30 (25)	74 (61.67)	2.6	IV
2	Use mobile apps	26 (21.67)	34 (28.33)	60 (50)	2.28	VIII
3	Use of Kissan Call Centers (KCC) for agriculture information	88 (73.33)	18 (15)	14 (11.67)	2.6	IV
4	Use of Mosam App for weather information	60 (50)	36 (30)	24 (20)	2.3	VII
5	Use of Agriculture Portal for selection of new crop verity	100 (83.33)	14 (11.67)	6 (5)	2.78	III
6	Use of Atamnirbhar Agriculture App for Agriculture advisory	108 (90)	9 (7.5)	3 (2.5)	2.87	II
7	Use of Agriculture Portal for Agriculture relative scheme	52 (43.33)	24 (20)	44 (36.67)	1.06	X
8	Use of Banking Portal for Agriculture relative loan	87 (72)	16 (13.33)	17 (14.67)	3.44	I
9	use agriculture portals to increase your income from other agricultural industries besides agriculture	31 (25.33)	71 (59.67)	18 (15)	1.71	IX
10	use the agriculture portal for information on agriculture related schemes	80 (66.67)	30 (25)	10 (8.33)	2.58	V
11	use TV to learn new techniques related to agriculture	84 (70)	20 (16.67)	16 (13.33)	2.56	VI

CA= Complete adoption PA=Partial Adoption NA= No Adoption

The data presented in table No. 4.3.1 shows that 61.7 per cent respondents no adoption, 25 per cent partial adoption and 13.3 per cent complete adoption of use Internet, with Mean Score 2.6 and Rank IV.

Highest 50 per cent respondents have No adoption, 28.3 per cent partial adoption and 21.7 per cent complete adoption of Use mobile apps, with Mean Score 2.28 and Rank VIII. Highest 73.3 per cent respondents have complete adoption, 15 per cent partial adoption and 11.7 per cent no adoption of Use of Kissan Call Centers (KCC) for agriculture information, with Mean Score 2.6 and Rank IV. Highest 50 per cent respondents have complete adoption, 30 per cent partial adoption and 20 per cent no adoption of use of Mosam App for weather information, with Mean Score 2.3 and Rank VII. Highest 83.3 percent full adoption, 11.7 percent partial and 5 percent no adoption for use of Agriculture portal for selection of new crop verity, with Mean Score and Rank 2.78 III. Highest 90 percent full adoption, 7.5 percent partial and 2.5 percent no adoption for use of Atamnirbhar agriculture app for Agriculture advisory with Mean Score and Rank 2.87 II. Highest 43.3 percent full adoption, 36.7 percent no adoption and 20 percent partial adoption for use of Agriculture portal for agriculture relative scheme with Mean Score and Rank 1.06 X. Highest 72 percent full adoption, 14.7 percent no adoption and 13.3 percent partial adoption for use of Banking portal for agriculture relative loan with Mean Score and Rank 3.44 I. Highest 59.7 percent partial adoption, 25.3 percent complete adoption and 15 percent no adoption for use agriculture portals to increase your income from other agricultural industries besides agriculture with Mean Score and Rank 1.71 IX. Highest 66.7 percent complete adoption, 25 percent partial adoption and 8.33 percent no adoption for use agriculture portals for information on agriculture related schemes with Mean Score and Rank 2.58 V. Highest 70 percent complete adoption, 16.7 percent partial adoption and 13.3 percent no adoption for use TV to learn new techniques related to agriculture with Mean Score and Rank 2.56 VI.

1. Distribution of respondents according to their overall adoption about ICT

S. No.	Categories	Frequency	Percentage
1	Low	69	57.5
2	Medium	30	25
3	High	21	17.5
Total		120	100

Based on overall adoption, respondents were categorized in to three groups and data have been reported in Table 4.2.4. It could be observed that more than half (57.5%) of the respondents had low adoption, followed by 25 per cent of them medium adoption, whereas only 17.5 per cent of them had high adoption of ICT.

2. Association the independent variables and Adoption level of ICT by the farmer

S. No.	Variables	X^2
1.	Age	9.6^{S}
2.	Education	5.15^{NS}
3.	Caste	4.2^{NS}
4	land holding	8.72^{S}
5	Annual income	10.14^{S}
6	Occupation	10.23^{S}
7	social participation	6.4^{NS}
8	type of family	8.7^{S}
9	House type	11.10^{S}
10	Family type	2.15^{NS}

Education (5.15^{NS}), cast(4.2^{NS}), and social participation (6.4^{NS}) and Family type (2.15^{NS}) negative and non significant whereas Age (9.6^{S}), land holding(8.72^{S}), Annual

income (10.14^{S}), occupation (10.23^{S}), type of family (8.7^{S}) and house type (11.10 ^{S}) significant relation with adoption level of ICT.

Conclusion

The following conclusion has been drown from the finding of the study statement wise most of the farmers adoption of use of Banking portal for agriculture relative loan with Mean Score and Rank 3.44 I and overall low adoption level for ICT. Age, land holding, Annual income, occupation, type of family and house type positive and significant whereas Education, caste and social participation and Family type negative and non significant relationship with adoption of ICT.

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