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AN EMPIRICAL STUDY OF DIGITAL ADOPTION IN AGRICULTURE BY FARMERS OF MUNGELI DISTRICT IN CHHATTISGARH

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Abstract :-

This study examines the extent and determinants of digital technology adoption among farmers in the Mungeli district of Chhattisgarh, a region where agriculture contributes significantly to the Gross State Domestic Product (GSDP) yet faces a productivity-employment gap. Utilizing a descriptive and analytical research design, primary data was collected from a stratified random sample of **120 farmers** across the Mungeli, Lormi, and Pathariya blocks.

The findings reveal a **moderate yet uneven level of digital adoption**. While smartphone penetration is relatively high (over **75%**), usage is primarily concentrated on informal social media platforms like **WhatsApp (74%)** and **YouTube (62.5%)** for information seeking. In contrast, specialized government and agricultural applications such as **e-NAM (5.8%)** and **Crop Doctor (10%)** remain significantly underutilized.

Statistical analysis using Chi-square tests confirms that **education level** and **age** are critical determinants of digital engagement, with younger, more educated farmers showing significantly higher adoption rates. Furthermore, a strong positive correlation (**r = 0.82**) was identified between **trust** in digital platforms and the **frequency of usage**. Major barriers to adoption include a lack of technical training (**46%**), language barriers, and limited awareness of specialized app features.

The study concludes that while farmers recognize digital agriculture as the future (weighted mean of **3.65**), a transition from informal to formal digital tools is required. The paper recommends targeted institutional training, the development of localized-language interfaces, and village-level demonstrations to bridge the digital divide and enhance agricultural productivity in the region.

Key Words :-

Farmer, Digital adoption, Agriculture, Chhattisgarh, State, Economy, Digital distribution, Work

I. INTRODUCTION

Chhattisgarh is one of the agricultural dominant states of India. The agriculture sector contributes 18% of India's GDP (economic survey 2024-25) whereas in Chhattisgarh the rice bowl of India, the agriculture sector has a share of 27% in GSDP.

Even after 75 years of India's independence, more than 50% population still relies on agriculture for livelihood and employment. When we study the Indian economy, it shows continuous sectoral mismatch.

The Agriculture & Allied sector contributed only 17.9% in GPD but workforce engagement is 44% - 46% which is almost half of the Indian population, Industry (secondary) sector contributes 27.1% share in GDP with 25% - 26% workforce engagement and Services (Tertiary) sector cover 55.0% part of the

Indian GDP despite yet it employs only 29% - 31% of workforce (Economic survey of India 2020-25, PLFS - NSSO).

The state of Chhattisgarh doesn't stand out from India's image. The Gross State Domestic Product (GSDP) of Chhattisgarh in financial year 2024-25 is Rs. 5,67,880 crore (at current prices). This was acquired 16.8% from Agriculture & Allied sector with workforce engagement of 70% - 75%. This sector is the driver of other 2 sectors of the economy where GSDP acquired 48.0% from industrial sector with 10% - 12% workforce engagement and 35.2% service sector with employment rate of 13% - 18% of total Chhattisgarh's workforce (Chhattisgarh Economic Survey 2024-25 and Periodic Labour Force Survey (PLFS) - NSSO).

In both India and Chhattisgarh, agriculture sector employs a large workforce but its value addition to the GDP is low, where service sector employs a small workforce but its value addition to the Gross Domestic Product is high. The adoption of digitalization is one of the major influencing factor for sectorial disparity in the work force employed in different sectors and their contribution in GDP.

Digitalization refers to use of information and communication technology, artificial intelligence, automation facilities to convert physical data into digital record, etc. is to be incorporated in various work processes, so to make the work faster, simpler and transparent.

The greater the digitalization, the greater the growth in particular sector of economy and vice versa. By 2025, 55% of service sector, 25% of the industrial sector and 20% of the agricultural sector will have adopted digitalization. The rate of digitalization adoption has a positive and significant impact on GDP and in sectoral growth rate. This reveal that the slower pace in adoption of digitalization by the agriculture sector relay them back as compared for other two sectors of economy.

The Chhattisgarh government has implemented several digitalization programs in addition to these implemented by the central government of India, to accelerate agricultural development.

Some of the major ones are as follows :-

1. **AgriStack :-** This is a join efforts of both Central and state government to develop a centralised digital database of farmers.
   i. **Unique Farmer ID:** This facilitate farmer's Aadhar base authentication and online verification of land record.
   ii. **CGFR Portal:** The Chhattisgarh Farmer Registry is also an extension of Central Government initiative to provide access their centralised database for regarding crop, and loan history to the farmers through internet at *cg.agristack.gov.in* .

2. **Toll-free Support :-** A dedicated helpline number (1800-233-1030) that provides real-time digital assistance to farmers.

3. **Token Tunhar Hath :** registered farmer of Chhattisgarh use this app extensively during the paddy season (November to February). This mobile application helps farmers to get digital appointments to sell their paddy directly to the government without waiting in long queues.

4. **Bhuiyan :** This app is Chhattisgarh state's official mobile application. It is mostly used for Legal/Land needs. This help farmers to download digitally signed khasra(B2), khatauni documents for the purpose of loan application or settlement of land disputes and so on.

5. **e-NAM :** This platform is jointly operated by Central and State Government of India. This is a digital market were the agricultural producers and consumers meet digitally and perform the transaction of buying and selling. Due to transparency the price of product are setted mutually. Out of the 1300 mandis only 20 mandis are linked with e-NAM portal from Chhattisgarh. This app is widely used by youngestor farmers and those growing commercial crops like vegetables, pulses, or oilseeds.

6. **Crop Doctor / IGKV App :** To provide technical support this app is developed by Indira Gandhi Krishi Vishwavidyalaya (IGKV) in Raipur CG. This allows farmers to upload crop image to get identification of disease and their remedies directly by the expert or scientist.

7. **Digital Crop Survey (DCS) App :-** This app is subsidiary of Chhattisgarh state's AgriStack initiative, this app records real-time data of crops sown across the state. This data helps to automate the registration for the Paddy Procurement (selling rice to the government) and ensures that insurance claims under the PM Fasal Bima Yojana are processed accurately.

8. **Custom Hiring App :-** There are several custom hiring centres within 50 km radius that offer modern agricultural machinery like tractors, harvesters and other specialized equipments for rent. It encourages small farmers to use modern machinery in agriculture without buying it and get higher production at lower cost.

Objective :-

1) To assess the level of digital adoption among farmers in Mungeli district of Chhattisgarh.
2) To identify the socio-economic factors (such as age, education, gender, and landholding size) influencing the adoption of digital technologies in agriculture.
3) To examine the usage pattern of digital platforms and applications (such as mobile apps, social media, and government portals) among farmers.

- **Rationale for Selecting Mungeli District**

Mungeli was chosen due to its agrarian economy and diverse farming population. Selecting Lormi, Pathariya, and Mungeli blocks allows for a comprehensive look at how digital tools are spreading across the district. Most of the research has been conducted in developed and tribal areas of Chhattisgarh, there are very limited studies related to developing regions like Mungeli. This research helps Krishi Vigyan Kendra and local administration to develop agriculture of this district and similar others.

Limitations :-

The study is limited to a sample of 120 farmers within one district, and findings may vary in regions with different digital infrastructure or literacy rates.

II. REVIEW OF LITERATURE

- **(Kaur, P., & Mazhar, S. H., 2024) :** This study was conducted in Durg district of Chhattisgarh to examine the adoption of improved paddy cultivation practices among farmers. The study revealed that a majority (53.34%) of respondents had a medium level of adoption, while a smaller proportion exhibited low and high adoption levels. The findings indicated that factors such as education, annual income, extension contact, farming experience, social participation, and economic motivation had a positive and significant relationship with the level of adoption. The study emphasized the need for strengthening extension services and farmer training programs to enhance the adoption of improved agricultural practices and increase productivity.

- **Sahu et al., (2025) :** This research was conducted to study the source of agricultural information in Baster district. The lack of network access and language problem in tribal belt, coupled with high cost of technology and equipment makes it difficult to rely entirely on digitalisation. However mobile phone (90.6%) and social media with 81.3% usages has emerged as primary source of information among progressive farmers.

- **Venkatraman et al., (2025) :** This research studies the impact of socio economic status on digital dividend in Sarguja division. They found that there is positive relationship between social economic status and digital literacy. The farmers with lower socio economic status are left out of smart farming like usages of drones, AI etc. This is because of lack of skills to interpret digital data and also unavailability of fund.

III. RESEARCH METHODOLOGY

This study utilizes a descriptive and analytical research design to evaluate digital adoption among farmers in the Mungeli district of Chhattisgarh.

The research was conducted across all three administrative blocks of the district: Mungeli, Lormi, and Pathariya. A stratified random sampling technique was used to ensure equal representation from each area. The total sample size of 120 respondents was equally divided among three blocks of Mungeli district.

Data Collection :-

Primary data was collected through structured questionnaire and personal interviews to capture quantitative and qualitative insights. The study focuses on how socio-economic variables like gender, age, income, and education level influence digital adoption.

Statistical Tools:

- Data were analysed by using -

Frequency and Percentage to categorize demographic data, Mean and Weightage Mean to measure average adoption levels and response variability and Ranking was used to determine the priorities of digital adoptions among farmers.

IV. RESULT AND DISCUSSION

Q1. Age :

Table 1 : Age

Age	Number of people	Weighted age
Below 25	27	472.5
25 – 40	70	2275
40 – 55	15	712.5
Above 55	08	500
	Total = 120	Mean age = 33

Interpretation: The data has been collected from 120 farmers of different age groups, 70 of them in the 25-40 age groups and 8 from above 55 years. The respondents are younger farmers with an average age of 33 years.

Q2. Gender:

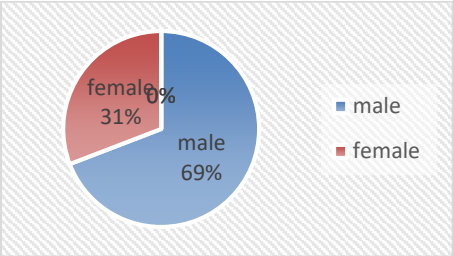

Fig.1 : Gender

Interpretation: Of the respondents, 69% were male farmers and 31% were female farmers. This shows even in 21st century, there are still fewer female farmers in agriculture.

Q3. Education Level:

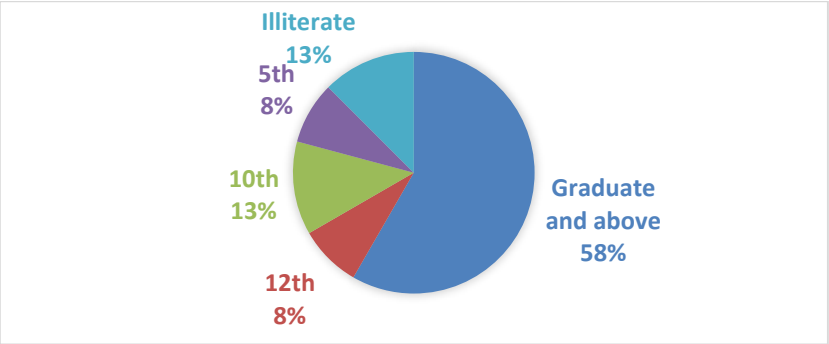

Fig.2 : Education level

Interpretation: More than 50% of farmer respondents have received higher education. Therefore, it is natural for them to be adept at technology and this makes them able to access and operate information from digital platforms easily. 29% respondents have school level education and only 13% respondents are illiterate, which may make it difficult for them to adopt digitalization in farming.

Q4. Type of Farmer (based on landholding size):

Table 2 : Type of Farmer (based on landholding size)

Type of farmer	Number of people	Percentage
Marginal farmer (Less than 2.5 acres)	71	59%
Small farmer (2.5 – 5 acres)	31	26%
Medium farmer (5 – 10 acres)	09	7.5%
Larger farmer (More than10 acres)	09	7.5%

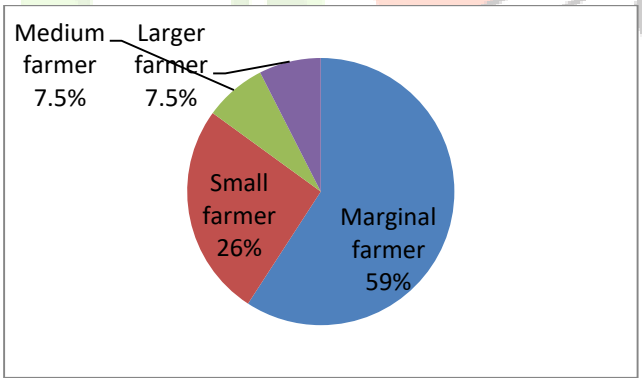

Fig. 3 Type of farmer

Interpretation: In Mungeli district, approximately 60% of farmers are marginal farmers, owning less than 2.5 acres of land, 26% are small farmers, owning 2.5 to 5 acres, and only a few farmers own more than 5 acres of land. More than 60% farmers have to do other work besides farming to earn their living. This shows that more than 60% of farmers are small farmers and only farming is not sufficient for their other needs such as; education, health and entertainment.

Q5. Type of Farming:

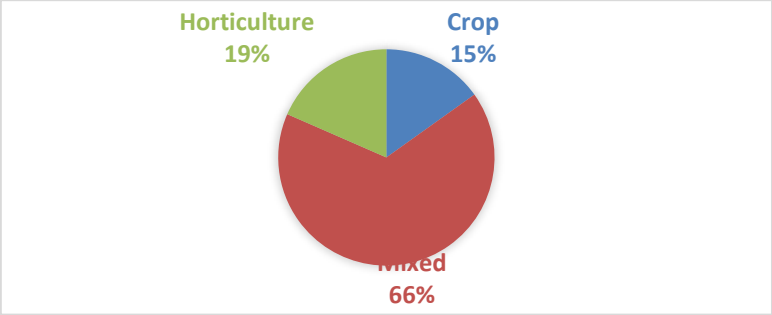

Fig. 4 : Type of farming

Interpretation: 15% farmers grow only crops, 19% practice mostly horticulture and 66% practice mixed farming. Mixed farming is a way to increase yields and income from limited land.

Q6. Do you use a smartphone? How much access to internet ?

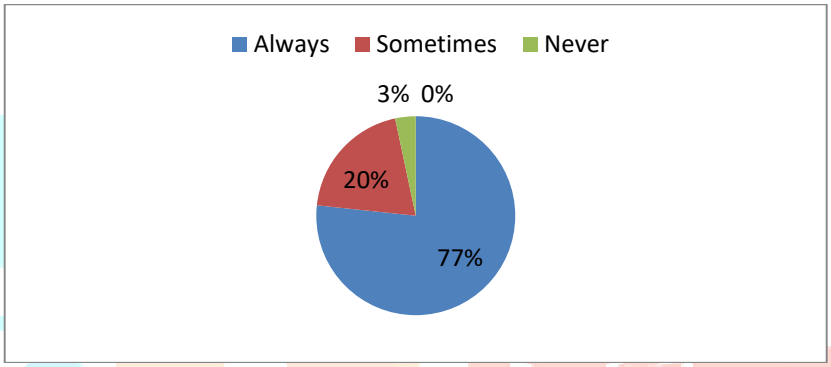

Fig. 5 : Use of smartphone

Interpretation: Over 75% of respondents use smartphones, while only 23% are non-users. Over 75% of users have constant internet connectivity, yet only a small number of farmers are aware of specific farming applications.

Q7. Have you ever used digital platforms for agricultural? If yes, which platforms or tools do you have used? (Tick all that apply)

Table 3 : use of digital platforms for agricultural

Have you ever used digital platforms for agricultural.	No. of people	Percentage
Yes	72	60
No	48	40

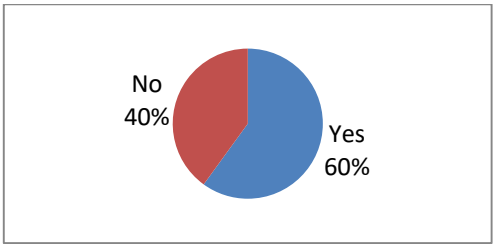

Fig. 6 : use of digital platforms for agricultural

Interpretation: Approximately 60% of farmers use smartphones for farming purposes. Most are unaware of dedicated farming applications, relying solely on social media platforms like YouTube, Whatsapp, Instagram and Facebook. Very few farmers use dedicated farming applications like Token Tuhar Hath, Kisan app, Bhuiyan app, eNAM and Crop Doctor. The popularity of these applications among farmers is also similar as in figure below :

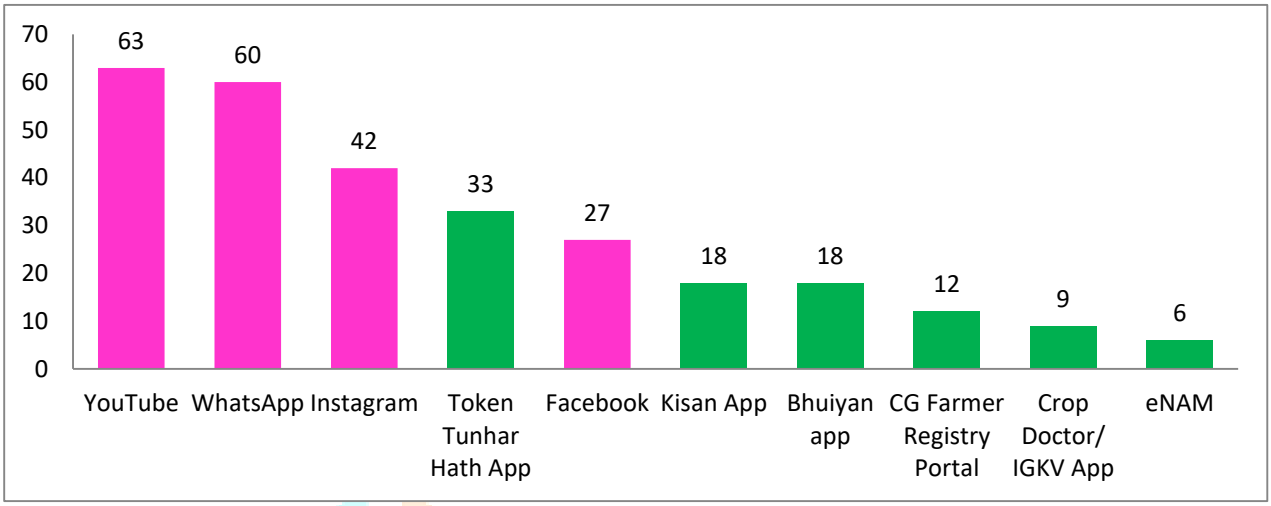

Fig. 7 : uses of social media

Table 4 : Application Usage Based on Education Level (% within each group)

Application	Below 25 (28)	25 - 40 (76)	41 -55 (8)	Above 55 (8)	Total Users
WhatsApp	20 (71.4%)	59 (77.6%)	6 (75%)	4 (50%)	89
YouTube	17 (60.7%)	48 (63.2%)	5 (62.5%)	5 (62.5%)	75
Instagram	14 (50%)	31 (40.8%)	0 (0%)	0 (0%)	45
Facebook	8 (28.6%)	28 (36.8%)	0 (0%)	0 (0%)	36
Token Tunhar Hath App	6 (21.4%)	41 (53.9%)	5 (62.5%)	3 (37.5%)	55
Kisan App	6 (21.4%)	16 (21.1%)	0 (0%)	0 (0%)	22
Bhuiyan App	3 (10.7%)	16 (21.1%)	0 (0%)	0 (0%)	19
CG Farmer Registry	6 (21.4%)	12 (15.8%)	0 (0%)	0 (0%)	18
Crop Doctor / IGKV App	6 (21.4%)	6 (7.9%)	0 (0%)	0 (0%)	12
eNAM	3 (10.7%)	4 (5.3%)	0 (0%)	0 (0%)	7

Interpretation: The table shows that among 120 respondents, **WhatsApp and YouTube are the most widely used applications** across all age groups, with 71–78% of younger and middle-aged farmers actively using them. Farmers aged **25–40**, who form the largest group, show the highest adoption of both social media and agricultural-specific apps like **Token Tunhar Hath App** and **Kisan App**, indicating a balance between social interaction and farm management needs. Younger farmers (Below 25) also actively use Instagram and Facebook, whereas older farmers (41–55 and Above 55) rely primarily on essential tools such as WhatsApp and YouTube, with minimal engagement on specialized platforms. Overall, app usage reflects a **clear link between age, tech comfort, and adoption of formal agricultural tools**, highlighting the need for targeted training for older farmers.

Table 5 : Application Usage Based on Education Level (% within each group)

Application / Education Level	Illiterate (10)	5th Standard (10)	10th Standard (13)	12th Standard (13)	Graduate & Above (74)
WhatsApp	5 (50.0%)	5 (50.0%)	6 (46.2%)	9 (69.2%)	45 (60.8%)
YouTube	6 (60.0%)	5 (50.0%)	6 (46.2%)	6 (46.2%)	33 (44.6%)
Instagram	0 (0%)	0 (0%)	3 (23.1%)	0 (0%)	33 (44.6%)
Facebook	0 (0%)	0 (0%)	3 (23.1%)	0 (0%)	21 (28.4%)
Token Tunhar Hath App	3 (30.0%)	0 (0%)	3 (23.1%)	6 (46.2%)	18 (24.3%)
Kisan App	0 (0%)	0 (0%)	0 (0%)	3 (23.1%)	15 (20.3%)
Bhuiyan App	0 (0%)	0 (0%)	0 (0%)	0 (0%)	15 (20.3%)
CG Farmer Registry	0 (0%)	0 (0%)	0 (0%)	0 (0%)	12 (16.2%)
Crop Doctor App	0 (0%)	0 (0%)	0 (0%)	0 (0%)	12 (16.2%)
eNAM	0 (0%)	0 (0%)	0 (0%)	0 (0%)	6 (8.1%)

Interpretation: The data clearly indicates a strong positive relationship between education level and mobile app usage among respondents. Illiterate and 5th standard groups show very limited digital engagement, primarily restricted to basic platforms like WhatsApp and YouTube, with almost no use of agricultural or government apps. As education increases to the 10th and 12th standard levels, social media usage becomes

more widespread, and limited adoption of agriculture-related applications begins. The highest adoption and diversity of apps are observed among graduates and above, who use both social media and multiple government/agriculture platforms such as Token Tunhar Hath, Kisan App, and Crop Doctor App. However, even among educated respondents, advanced agri-marketing platforms like eNAM show relatively low usage. Overall, education significantly influences digital literacy, awareness, and willingness to use agricultural technology, suggesting that targeted digital training programs are necessary to improve adoption among lower-education groups.

Table 6 : Application Usage Based on Landholding Size (% within each group):

Application	Marginal Farmers (73)	Small Farmers (33)	Medium Farmers (5)	Large Farmers (9)
WhatsApp	52 (71.23%)	20 (60.61%)	4 (80.00%)	4 (44.44%)
YouTube	41 (56.16%)	17 (51.52%)	1 (20.00%)	5 (55.56%)
Instagram	28 (38.36%)	12 (36.36%)	0 (0%)	0 (0%)
Facebook	20 (27.40%)	8 (24.24%)	0 (0%)	0 (0%)
Token Tunhar Hath App	24 (32.88%)	8 (24.24%)	4 (80.00%)	4 (44.44%)
Kisan App	16 (21.92%)	8 (24.24%)	0 (0%)	0 (0%)
Bhuiyan App	16 (21.92%)	4 (12.12%)	0 (0%)	0 (0%)
CG Farmer Registry	12 (16.44%)	0 (0%)	0 (0%)	0 (0%)
Crop Doctor App	12 (16.44%)	4 (12.12%)	0 (0%)	0 (0%)
eNAM	4 (5.48%)	4 (12.12%)	0 (0%)	0 (0%)

Interpretation: The data shows a clear trend in **digital adoption among different farmer categories**. Marginal farmers (73 respondents) predominantly use WhatsApp (71%) and YouTube (56%), indicating reliance on communication and video-based learning. Small farmers (33 respondents) show slightly lower usage but a broader engagement with agricultural apps like Kisan App and eNAM, reflecting moderate digital literacy. Medium farmers (5 respondents) use WhatsApp and Token Tunhar

Hath App extensively (80%), suggesting targeted use of essential platforms despite a small sample. Large farmers (9 respondents) display moderate adoption of social media and agricultural apps (44–56%). Overall, while social media platforms dominate usage across all categories, formal agricultural marketing tools, particularly eNAM, remain underutilized, highlighting the need for increased awareness and training for effective digital adoption.

Q8. How frequently do you use digital platforms for agricultural purposes?

Table 7 : Frequency of using digital platforms for agricultural purpose

Use digital platforms	No. of people
Daily	5
Weekly	23
Occasionally	65
Never	27

Interpretation: The rate of digital adoption in agriculture is reflected in how often farmers use digital platforms to support their farming. Only 4% of farmers use them daily, 19% weekly, and most of them use digital platforms only when necessary.

Q9. How do you feel about trust and safety in online?

Table 8 : feel about trust and safety in online

Trust and safety	No. of people	Weightage	product
High trust	18	5	90
Some trust	42	4	168
neutral	30	3	90
Low trust	15	2	30
No trust	15	1	15

Weightage Mean = 3.27

Interpratation: Farmers' trust in online farming methods appears neutral, with a weighted mean score of 3.27. More than 50% of respondents trust online farming methods. This suggests that farmers are not particularly enthusiastic about using online tools for farming.

Q10. What motivates you to use digital platforms?

Table 9 : motivation to use digital platforms

Motivates you to use digital platforms	No. of people	Rank
Time saving	60	1
Market information	36	2
peer influence	33	3
govt. support	30	4
easy of shelling	24	5
high income	15	6

Interpretation: The factors that motivate farmers to adopt digitalization in agriculture are time saving, market information, peer influence, government support and high income, which are ranked 1, 2, 3, 4, 5, and 6 respectively. Most farmers are attracted because it saves them time and money.

Q11. What are the main challenges you face in using digital tools?

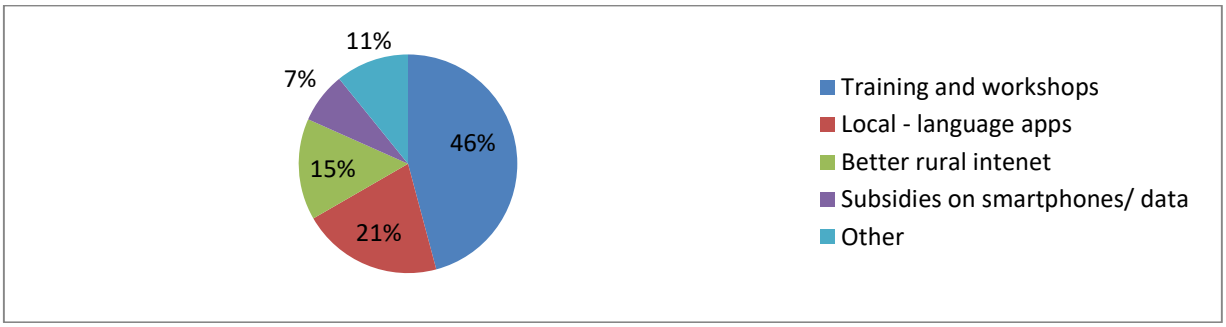

Fig. 8 : main challenges you face in using digital tools

Interpretation: 46% of farmers need training and workshops on the use of specific farming applications because they don't know how to use existing ones. Most rural Mungeli residents struggle with English, so 21% of farmers need applications in the local language to meet their user-friendly needs. Only 15% of farmers face internet connectivity issues, and 7% face financial constraints and require subsidies for internet- connected devices.

In short, most farmers aren't aware of the features that make farming easier and more convenient. Therefore, the government and support institutions should focus on reality rather than focusing solely on paperwork.

Q12. Do you now prefer digital platforms over traditional markets?

Table 10 : prefer digital platforms over traditional markets

Prefer digital platforms over traditional market	No. of people	Weightage	Product
Yes	36	3	108
Sometimes	51	2	102
No	33	1	33

Weightage Mean = 2.02

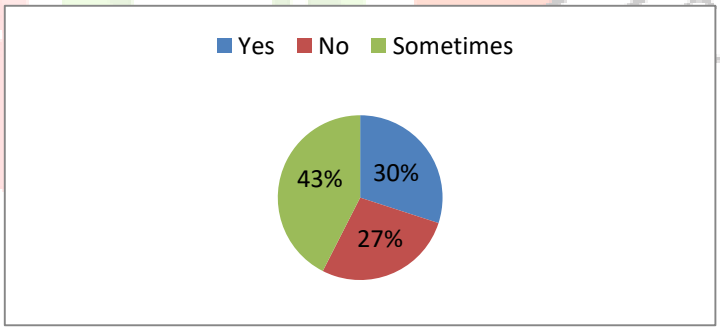

Fig. 9 : prefer digital platforms over traditional markets

Interpretation: The weightage mean score for the shift from traditional marketing to digital marketing in agriculture is 2.02. This indicates that farmers are positive and highly willing to embrace digitalization in agriculture. This could help the agricultural sector grow in tandem with other economic sectors.

Q13. Do you think digital agriculture is the future of farming?

Table 11 : future of farming

Future of farming	No. of people	Weightage	Product
Strongly Agree	17	5	85
Agree	61	4	244
Neutral	29	3	87
Disagree	10	2	20
Strongly disagree	3	1	3

Weightage Mean = 3.65

Interpretation: Given the prevalence of digitalization in every aspect of life, farmers overall agree that digitalization is the future of agriculture. Only 13 out of 120 farmers oppose digital farming, but the weighted mean score is 3.65. This indicates that most farmers believe digitalization is the future of agriculture.

Statistical Analysis and Hypothesis Testing :-

To examine the relationship between socio-economic variables and digital adoption, Chi-square test and correlation analysis were applied. The level of significance was considered at 5% ($p < 0.05$).

1. Chi-square Test: Education and Digital Adoption

Table 12 : Chi-square Test: Education and Digital Adoption

Education Level	Use Digital (Yes)	No use	Total
Illiterate	3	7	10
5^{th} standard	4	6	10
10^{th} standard	8	5	13
12^{th} standard	10	3	13
Graduate & Above	47	27	74
Total	72	48	120

Calculation Summary:

Table 13 : Statical data

Statistic	Value
Chi-square (χ^2)	9.52
Degrees of Freedom (df)	4
Significance Level	5%
p-value	< 0.05
Result	significant

Interpretation: There is a significant association between education level and digital adoption. Higher educated farmers are more likely to use digital platforms compared to lower educated farmers. This shows that education positively influences digital literacy and adoption in agriculture.

2. Chi-square Test: Age Group and App Usage :

Table 14 : Chi-square Test: Age Group and App Usage

Age Group	Use Apps	Do Not Use	Total
Below 25	20	7	27
25–40	50	20	70
40–55	7	8	15
Above 55	3	5	8
Total	80	40	120

Calculation Summary -

Table 15 : statistical data

Statistic	Value
Chi-square (χ^2)	8.31
Degrees of Freedom (df)	3
Significance Level	5%
p-value	< 0.05
Result	significant

Interpretation: There is a significant relationship between age and digital app usage. Younger farmers are more likely to use digital applications, while older farmers show lower adoption levels.

3. Correlation Analysis: Trust and Usage Frequency

Table 16 : Correlation Analysis: Trust and Usage Frequency

Statistic	Value
correlation Coefficient (r)	+0.82
Significance Level	5%
p-value	< 0.05
Result	significant positive relationship

Interpretation: There is a strong positive correlation between trust and usage frequency of digital platforms. Farmers with higher trust levels tend to use digital tools more frequently, indicating that trust is a key factor in digital adoption.

V. CONCLUSION

The present study on "An Empirical Study of Digital Adoption in Agriculture by Farmers of Mungeli District in Chhattisgarh" reveals that digital adoption in the agricultural sector is at a moderate level and is unevenly distributed across different socio-economic groups.

The findings indicate that usage is largely concentrated on general-purpose platforms such as WhatsApp and YouTube, while the adoption of specialized agricultural applications such as e-NAM, Kisan App, and Crop Doctor remains limited. This suggests that farmers are more comfortable with informal digital tools than structured agricultural platforms.

The study further establishes that socio-economic factors are significantly associated with digital adoption behavior. Chi-square analysis confirms a statistically significant relationship between education level and digital adoption, as well as between age and application usage, indicating that younger and more educated farmers are more likely to adopt digital technologies. In addition, correlation analysis shows a strong positive relationship between trust and frequency of usage (r = 0.82), highlighting trust as an important determinant of digital adoption.

Despite relatively high smartphone usage, the effective use of agriculture-specific digital services remains low. The study identifies key challenges such as lack of digital training, limited awareness, language barriers, and inadequate rural digital infrastructure, which restrict deeper adoption.

Overall, while a basic level of digital access and awareness exists among farmers, the transition towards effective and specialized digital adoption in agriculture is still in progress. Therefore, targeted institutional support, capacity building, and trust enhancement measures are essential to fully realize the potential of digital agriculture in improving productivity, market access, and farmers' income.

Recommendations:

1. Government and agriculture departments should regularly provide training to farmers so they can easily use farming apps.
2. Farmers should be made more aware of useful agricultural apps like e-NAM, Kisan App, and Crop Doctor, so they rely less on social media for farming information.
3. All digital farming apps should be available in local languages and in simple interface so farmers can understand and use them easily.
4. The local agricultural support staff hould organised demonstration events at village level.

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