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Attitude of farmers towards digital marketing of agricultural produce

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Abstract

The government of India has introduced digital marketing as a forward-looking initiative to facilitate the direct digital sale of products without intermediary involvement. This approach proves advantageous for farmers, enabling them to connect with numerous buyers and secure higher prices for their products. Digital marketing also serves as a valuable tool for farmers looking to sell their produce on a global scale. The present study was carried out to find out attitude of the farmers towards digital marketing of agricultural produce in the Marathwada region of Maharashtra. The study reported that the majority of the respondents were middle-aged, educated up to the graduation level, small landholders belonging to joint families. Majority of them having well or borewell as a source of irrigation and had a medium level of farming experience, annual income, mass media exposure, extension contact, scientific orientation, and economic motivation. Whereas majority of them were having low level of social participation and cent percent respondents having smartphone. It is also observed that majority of the respondents were used the Google Pay app for money transaction, and used WhatsApp as online platform for marketing of their produce. The study shows that majority of the respondent have moderately favourable attitude towards the digital marketing.

Keywords: Attitude, digital marketing, agriculture produce

Introduction

India is recognized as a developing nation characterized by an economy centered around agriculture. The agricultural and allied sectors play a pivotal role in the nation's economic framework, serving as the foundation of the Indian economy. This sector contributes approximately less than 20 percent of the country's national GDP and employs nearly half of the workforce. While government initiatives and efforts from various organizations have positively impacted agricultural production, even though the major problem lies in the very low income of farmers. Factors such as small landholdings, low productivity, market channel inadequacies, and the prevalence of middlemen in marketing contribute to the less profitability in farming. To address this issue and promote sustainable farming practices, one strategy is to augment farmers' incomes by incorporating Digital Technologies not only into crop management, but also into the agricultural marketing process. Online Marketing refers to the marketing of any product or service in digital format. It constitutes a type of direct marketing that electronically connects consumers with sellers through interactive technologies such as websites, online platforms, mobile communications, social media etc. Governments have been actively involved in fostering the development of agricultural marketing for several decades. In today's digitally dominant landscape, there is significant potential to comprehensively enhance

agricultural marketing from end to end through the utilization of digital applications. ICT enables small-scale farmers to connect with multiple buyers interested in purchasing fresh agricultural products at higher prices. Previously, these farmers had limited dealings with only a few direct buyers. The use of digital and internet-based applications on Android phones provides farmers with crucial market information, contributing to the reduction of market distortions, losses in logistics and transportation, as well as minimizing wastage and damage to products. In digital marketing landscapes, applications on Android mobile devices and the online platform play a important role in identifying farmers, agricultural input suppliers, buyers of agricultural outputs, storage facilities, and recognized financial institutions for investments. Therefore, the farmers are getting the higher returns to their yields in the digital agriculture markets.

Cutting-edge technologies such as artificial intelligence (AI) and Blockchain are utilized to detect subpar quality in the food grain chain of any agricultural commodity, enabling prompt and effective interventions against its deterioration. This proactive approach provides consumers with a competitive advantage. Private sector initiatives are effectively conveying necessary information to both consumers and farmers on a daily basis. Noteworthy efforts in India, such as e-choupal by ITC, Reliance, Kisan Mandi Online Agri., "MORE" (Aditya Birla Group),

AGMARKNET, M & M (Shubhlabh), Godrej group, NAFED, NaPanta app, play a crucial and responsible role in promoting the welfare of farmers. The online marketing of agricultural products contributes to increased income, particularly benefiting small-scale producers (farmers). Hence it is encouraging the small holding rural youth to continue in the agriculture as the future seems to be bright. For rural development government has taken many steps.

The initiation of the Digital India movement on July 1, 2015, aimed to convert rural India into a digitally empowered economy. Subsequently, many industries have commenced selling their products digitally. Young farmers are now inclined to embrace digital marketing tools to promote their products globally. Although the concept of digital marketing is prevalent across all business sectors, its integration in the agricultural sector has been limited due to factors like insufficient knowledge, security concerns, lack of digital tools, farmer's hesitancy to use it, and not ready to accept new methods. Nevertheless, with the rising trend of digital literacy in rural areas and advancements in agribusiness infrastructures, young farmers are increasingly open to adopting online marketing platforms, thereby empowering agricultural startups.

The COVID-19 pandemic has also influenced farmers to shift their mindset towards adopting online marketing. In the year 2020, consumers gained the ability to access the internet at any time and from any location worldwide. The inherent digital nature of digital marketing allows consumers to stay informed about products or services around the clock. The internet facilitates various activities for consumers, including visiting a company's website, reading information, and making purchases. This increased accessibility has heightened consumer engagement and enhanced their overall experience. The internet provides exhaustive product details that customers can rely on to make well-informed purchasing decisions.

Many companies utilize digital marketing to showcase their products, making it easy for consumers to compare offerings from different companies conveniently. This eliminates the need for consumers to visit multiple retail stores for product comparisons. The introduction of 5G internet service in India on October 1, 2022, enhances the digital platform, enabling viewers to easily share information and assess the features of products or services with others. Hence, the present study was undertaken with following specific objectives;

1. To study the profile of the respondents.
2. To know attitude of the respondents towards digital marketing of agricultural produce.

Methodology

The present study aimed to investigate the attitudes of farmers towards the digital marketing of agricultural produce. The study was carried out in randomly selected four districts of the Marathwada region in Maharashtra viz., Aurangabad, Parbhani, Jalna, and Nanded. From each of these districts, 20 respondents who utilized online platforms for marketing their agricultural produce during the COVID-19 pandemic and lockdown were selected as a respondent i.e. total sample size of 80 respondents for the research study. The study employed an ex-post facto research design, utilizing an interview schedule as the tool for collecting

necessary data. Fourteen independent variables, including age, education, landholding, farming experience, family type, annual income, social participation, mass media exposure, possession of ICT tools, extension contact, scientific orientation, economic motivation, use of online payment modes, and use of online platforms for marketing agricultural produce, were considered for the study. The variables were measured with the help of suitable scales with modifications and structured schedules.

In order to find out the attitude of the farmers towards digital marketing of agricultural produce, the schedule was developed on the basis of previous study and discussion with experts. There are 21 statements, out of which 18 statements were positive and 3 statements were negative. These statements were measured on a 5-point rating scale, of strongly agree (SA), agree (A), undecided (U), disagree (D) and strongly disagree (SD). Scores of 5, 4, 3, 2, and 1 were awarded to positive statements from strongly disagree to strongly agree respectively and the reverse for negative statements. Mean score was computed from the respondents' attitudinal scores, and used as a benchmark for categorising respondents into having less favourable, moderately favourable and highly favourable attitudes. The suitable statistical tools used were frequencies, percentages, arithmetic mean, and standard deviation.

Results and Discussion

Profile of the Respondents

Table 1 provides an overview of the respondents' profiles. The data indicates that the majority (65.00%) of respondents fell within the middle age group (i.e., between 30 to 49 years), while an equal percentage of respondents, accounting for 17.50 percent each, belonged to the young age group (up to 29 years) and the old age group (above 50 years). Regarding the educational background of respondents, 33.75 percent had education up to the graduation level, followed by 20.00 percent with education up to the postgraduate level. Whereas, 15.00 percent had education up to the secondary level, another 15.00 percent held diplomas, and only 3.75 percent had education up to the primary school level.

Concerning the landholding, the 38.75 percent of the respondents were classified as small landholders (i.e., 1.01 to 2.0 hectares), while 32.50 percent of them were categorized as marginal landholders (up to 1.0 hectare). Whereas, 15.00 percent respondents were semi-medium landholders (2.01 to 4.0 hectares), and 8.75 percent of them fell into the category of medium landholders (4.01 to 10.0 hectares). Only 5.00 percent were categorized as big landholders.

In case of farming experience, most of the participants (68.75%) possessed a medium level of farming experience. While, 18.75 percent had low farming experience, and 12.50 percent had high farming experience. Regarding the family type of the respondents, the majority (71.25%) belonged to joint families, while 28.75 percent of them were from nuclear families.

In terms of farming experience, 68.75 percent of the respondents possessed a medium level of farming experience, while 18.75 percent of them had low experience, and 12.50 percent of them had a high level of farming experience. Concerning the family structure of the

respondents, the majority (71.25%) belonged to joint families, whereas 28.75% were part of nuclear families.

Data also indicated that half of the respondents (50.00%) were having medium level of annual income (i.e. in between Rs. 76,976 /- to Rs. 1,87,959 /-), Whereas 32.50 percent of them having low income i.e. below Rs. 76,975 /- and 17.50 percent of them were having high level (Above Rs. 1,87,960 /-). Regarding source of irrigation, it was observed that majority of the respondents (50.00%) were having well or borewell as a source of irrigation. Whereas 20 percent of them were having farm pond, followed by 5.00 percent of them were having canal and similar percentage of them were having river as a source of irrigation.

In terms of the social participation of the respondents, the majority (67.50%) exhibited a low level of social participation, while 23.75 percent and 8.75 percent them were having medium and high levels of social participation, respectively.

Concerning mass media exposure, the majority of respondents (48.75%) had a medium level of exposure to mass medium, while 32.50 percent of them having low exposure and 18.75 percent having high exposure.

Regarding possession of ICTs, cent percent respondents (100%) having smartphone, followed by 5.00 percent, 2.50 percent and 2.50 percent of them having laptop, PC / Desktop, and Tablet as ICT tools, respectively. As regards to extension contact, majority of the respondents (62.50%) were having medium level of extension contact, followed by similar percentage of them (i.e.18.75%) of them were having high and low level of extension contact.

In case of scientific orientation of the respondents, 55.00 percent of them were having medium level of scientific orientation, followed by 23.75 percent and 21.25 percent of them were having high and low level of scientific orientation, respectively. Regarding economic motivation of the respondents, majority of them (65.00%) were having medium level of economic motivation, whereas 31.25 percent of them were having low level of economic motivation and only 3.75 percent of them were having high level of economic motivation.

Use of online platform for payment and marketing of agricultural produce

Table 2 indicates that majority of the respondents (55.00%) were used the Google Pay app for money transaction, followed by internet banking (28.75%), SBI Yono (21.25%), Bhim app (13.75%), and PhonePe (6.25%). The data regarding digital marketing of agricultural produce, Table 3 revealed that majority of the respondents (77.55%) were used WhatsApp as an online platform for marketing of their produce followed by dedicated mobile marketing app (17.50%) and mobile voice call (15.00%).

Attitude of the respondents towards digital marketing of agricultural produce

Statement wise attitude of the respondents towards digital marketing of agricultural produce presented in Table 4. The data indicated that almost half of the respondents strongly agreed that Farmers may spend more time working on their farms due to time saved by digital marketing (60.00%), digital platform has helped the farmers to know the market prices at various locations (58.75%), farmers save a lot of time by digital marketing (57.50%), Due to the immediate demand of the consumer, it has become easy to sell agricultural produce (57.50%), Digital marketing of agricultural produce has made it possible for farmers to reach customers outside their jurisdiction (57.50%), Agricultural goods are fetching higher prices due to online sales (56.25%), and Online advertising of agricultural produce gives farmers access to buyers quickly and on a large scale (55.00%). Data further indicates that equal percentage of the respondents (i.e. 52.50%) were strongly agreed that Digital marketing of agricultural produce has reduced the need for storage of agricultural produce; Online demand and sales of agricultural commodities eliminates the middlemen, resulting in reasonable prices for both farmers and consumers; and Digital marketing platform is a reliable means of selling agricultural produce for farmers.

Whereas 51.50 percent of them were strongly agree that digital marketing of agricultural produce has more opportunities than the traditional method, followed by Digital marketing can be a powerful tool for increasing agricultural produce sales on a large scale (50.00%) and It is very simple to gather information about digital marketing of agricultural produce (50.00%).

Regarding negative statement of attitude of the farmers towards digital marketing of agricultural produce, the data revealed that 47.50 percent of the respondents were strongly disagree towards the statement of farmers who have maximum marketable produce find it easier to sell their produce online than others.

The finding of the study are in line with the finding of Peter and Latha (2021) ^[5] and Rameshkumar (2022) ^[6] and Damodar Jena *et al.* (2023) ^[3].

The overall attitude of the farmers was represented in three categories *viz.*; less favourable, moderately favourable and highly favourable (Table 5). The data indicates that 80.00 percent of the respondents showed moderately favourable attitude towards digital marketing, while 11.25 percent of them had less favourable attitude and 8.75 percent of them had highly favourable attitude. This shows that majority of the respondent have moderately favourable attitude towards the digital marketing.

Table 1: Profile of the respondents

(N=80)

Sr. No.	Profile / Characteristics	Percentage	Frequency
1	Age		
	Young (Upto 29 yrs)	14	17.50
	Middle (30 to 49 yrs)	52	65.00
	Old (50 & Above)	14	17.50
	Mean – 39.50 yrs SD = 9.50		
2	Education		
	Illiterate	00	00.00
	Primary	03	03.75
	Secondary	12	15.00
	Higher Secondary	10	12.50
	Diploma	12	15.00
	Graduate level	27	33.75
	PG level & Above	16	20.00
3	Land Holding		
	Marginal (Upto 1.0 ha.)	26	32.50
	Small (1.01 to 2.0 ha.)	31	38.75
	Semi-medium (2.01 to 4.0 ha.)	12	15.00
	Medium (4.01 to 10.0 ha.)	07	08.75
	Big (10.01 ha. & Above)	04	05.00
4	Farming Experience		
	Low (Upto 4.80 yrs)	15	18.75
	Medium (4.81 to 25.26 yrs)	55	68.75
	High (25.27 yrs & Above)	10	12.50
	Mean = 15.03 SD = 10.23		
5	Family Type		
	Joint	57	71.25
	Nuclear	23	28.75
6	Annual Income		
	Low (Upto Rs.76,975/-)	26	32.50
	Medium (Rs. 76,976 to Rs. 1,87,959/-)	40	50.00
	High (Rs. 1,87,960 /- & Above)	14	17.50
	Mean = 1,32,467.50 SD = 55491.50		
7	Source of Irrigation*		
	No irrigation facilities	08	10.00
	Well / Borewell	40	50.00
	Canal	04	05.00
	River	04	05.00
	Farm pond	16	20.00
8	Social Participation		
	Low (Upto 1)	54	67.50
	Medium (2 to 3)	19	23.75
	High (4 & Above)	07	08.75
	Mean = 2.5 SD = 1.5		
9	Mass media exposure		
	Low (Upto 1.05)	26	32.50
	Medium (1.06 to 3.80)	39	48.75
	High (3.81 & Above)	15	18.75
	Mean = 2.43 SD = 1.37		
10	Possession of ICT tools *		
	Laptop	04	05.00
	PC/ Desktop	02	02.50
	Smart Phone	80	100.00
	Tablet	02	02.50
11	Extension Contact		
	Low (Upto 6)	15	18.75
	Medium (7 to 45)	50	62.50
	High (46 & Above)	15	18.75
	Mean = 26 SD = 19		
12	Scientific Orientation		
	Low (Upto 23)	17	21.25
	Medium (24 to 29)	44	55.00
	High (30 & Above)	19	23.75
	Mean = 26.5 SD = 2.53		
13	Economic Motivation		
	Low (Upto 19)	25	31.25
	Medium (20 to 23)	52	65.00
	High (24 & Above)	03	03.75
	Mean = 21.50 SD = 1.51		

* Multiple responses

Table 2: Distribution of the respondents according to their use of online payment mode

(N=80)			
Sr. No.	Category	Frequency	Percentage
1	PhonePe	05	06.25
2	Bhim app	11	13.75
3	Google Pay	44	55.00
4	Internet banking	18	28.75
5	SBI Yono	17	21.25

* Multiple responses

Table 3: Distribution of the respondents according to their use of online platform for marketing

(N=80)			
Sr. No.	Category	Frequency	Percentage
1	WhatsApp	62	77.50
2	Mobile Marketing app	14	17.50
3	Mobile voice call	12	15.00

* Multiple responses

Table 4: Attitude of respondents towards digital marketing of agricultural produce

(N=80)						
Sr. No.	Statement wise attitude of respondents towards digital marketing	Strongly Agree	Agree	Un-decided	Dis-agree	Strongly disagree
1	Farmers may spend more time working on their farms due to the time saved by digital marketing.	48 (60.00)	16 (20.00)	07 (08.75)	06 (07.50)	03 (03.75)
2	Digital platform has helped the farmers to know the market prices in various locations	47 (58.75)	21 (26.25)	05 (06.25)	04 (05.00)	03 (03.75)
3	Farmers save a lot of time by digital marketing of their agricultural produce	46 (57.50)	20 (20.00)	07 (08.75)	05 (06.25)	03 (03.75)
4	Due to the immediate demand of the consumer, it has become easy to sell agricultural produce	46 (57.50)	20 (25.00)	06 (07.50)	04 (05.00)	04 (05.00)
5	Digital marketing of agricultural produce has made it possible for farmers to reach customers outside their jurisdiction	46 (57.50)	18 (22.50)	07 (08.75)	05 (06.25)	04 (05.00)
6	Agricultural goods are fetching higher prices due to online sales	45 (56.25)	20 (25.00)	07 (08.75)	06 (07.50)	04 (05.00)
7	Online advertising of agricultural produce gives farmers access to buyers quickly and on a large scale	44 (55.00)	19 (23.75)	06 (07.50)	08 (10.00)	03 (03.75)
8	Digital marketing of agricultural produce has reduced the need for storage of agricultural produce	42 (52.50)	20 (25.00)	07 (08.75)	06 (07.50)	05 (06.25)
9	Online demand and sales of agricultural commodities eliminates the middlemen, resulting in reasonable prices for both farmers and consumers	42 (52.50)	23 (28.75)	07 (08.75)	05 (06.25)	03 (03.75)
10	Digital marketing platform is a reliable means of selling agricultural produce for farmers	42 (52.50)	20 (25.00)	09 (11.25)	06 (07.50)	03 (03.75)
11	Digital marketing of agricultural produce has more opportunities than the traditional method	41 (51.25)	28 (35.00)	05 (06.25)	04 (05.00)	04 (05.00)
12	Digital marketing can be a powerful tool for increasing agricultural produce sales on a large scale	40 (50.00)	28 (35.00)	05 (06.25)	04 (05.00)	03 (03.75)
13	It is very simple to gather information about digital marketing of agricultural produce	40 (50.00)	24 (30.00)	09 (11.25)	04 (05.00)	03 (03.75)
14	The digital marketing of agricultural produce makes it possible to get more demand for agricultural produce	37 (46.25)	27 (33.75)	06 (07.50)	06 (07.50)	04 (05.00)
15	Digital marketing of agricultural produce is less expensive	36 (45.00)	26 (32.50)	08 (10.00)	06 (07.50)	04 (05.00)
16	Only young people can effectively use the digital marketing system	33 (41.25)	29 (36.25)	09 (11.25)	05 (06.25)	04 (05.00)
17	Farmers who have more financial income find it easier than others to sell agricultural produce online	32 (40.00)	28 (35.00)	09 (11.25)	06 (07.50)	05 (06.25)
18	Digital marketing of Agricultural Commodity is a safe medium for selling agricultural commodities.	29 (36.25)	30 (37.50)	12 (15.00)	06 (07.50)	03 (03.75)
19	Digital marketing of agricultural produce seems technically very complicated (-)	04 (05.00)	12 (15.00)	21 (26.25)	21 (26.25)	22 (27.50)
20	Farmers can be cheated in the digital agricultural marketing system (-)	02 (02.50)	06 (07.50)	18 (22.50)	28 (35.00)	26 (32.50)
21	Farmers who have maximum marketable produce find it easier to sell their produce online than others (-)	03 (03.75)	05 (06.25)	08 (10.00)	26 (32.50)	38 (47.50)

* Figures in parentheses indicate the percentage

Table 5: Distribution of the respondents according to their attitude towards digital marketing

(N=80)			
Sr. No.	Category	Frequency	Percentage
1	Less Favourable (Uto 76.51 scores)	09	11.25
2	Moderately favourable (76.52 to 102.33 scores)	64	80.00
3	Highly favourable (102.34 & Above)	07	08.75
	Mean = 89.92 SD = 12.41		

Conclusion

The study reported that majority of the respondents were middle aged, educated upto graduation level, small land holders, belong joint family, having well or borewell as a source of irrigation, and having medium level of farming experience, annual income, mass media exposure, extension contact, scientific orientation, economic motivation. Whereas majority of them were having low level of social participation and cent percent respondents having smartphone. It is also observed that majority of the respondents were used the Google Pay app for money transaction, and used WhatsApp as online platform for marketing of their produce. The study shows that majority of the respondent have moderately favourable attitude towards the digital marketing.

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