



Analysis of Socio-Economic Determinants of Farmers' Attitude towards Online Agricultural Marketing

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Abstract

Keywords

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Agriculture is the main driver of the economy of developing nations like India. Due to the effects of COVID-19, everything is conducted online. To change the country into a knowledge-rich e-learning society, nations like India are incorporating ICT increasingly into their national development plans and implementing strategies for its widespread promotion. Any digital marketing of agricultural goods or services is referred to as online agricultural marketing. Online marketing is a type of direct marketing that uses interactive technology such as websites, social media, mobile applications, online forums, emails, and mobile communications to connect buyers and sellers electronically. Online agriculture marketing is attracting the attention of farmers as well. Positivity regarding online agricultural marketing will undoubtedly increase enthusiasm in utilizing its advantages over time. The current study attempted to highlight such elements about the use of online agriculture marketing because attitude is dependent on an individual's socio-personal disposition. Six districts in the Marathwada region of Maharashtra Parbhani, Hingoli, Nanded, Beed, Jalna, and Chatrapati Sambhajnagar were research area of the study. Data from 180 farmers who use online agriculture marketing was through face-to-face interviews. The study's socio-personal determinants were analyzed using correlational analysis, and the results showed that attitudes toward using online agricultural marketing are significantly correlated with education, land ownership, extension contact, social participation, scientific orientation, economic motivation, technosavviness, risk orientation, annual income, and mass media exposure.

1. Introduction

The Economic Survey 2023-24, released by the Ministry of Finance, Government of India reported that the Indian agriculture sector provides livelihood support to about 42.30 per cent of the population and has a share of 18.20 per cent in the country's GDP at current prices. The sector has been buoyant, which is evident from the fact that it has registered an average annual growth rate of 4.18 per cent at constant prices over the last five years and as per provisional estimates for 2023-24, the growth rate of the agriculture sector stood at 1.4 per cent). The COVID-19 pandemic is the greatest global humanitarian challenge the world. The World Health Organization (WHO) declared COVID-19 a global pandemic in March 2020. The impact of lockdown imposed in the entire country owing to COVID-19 on the overall production levels in the agricultural and allied sector has been significant with overall production levels in the agriculture and allied sector declining by 47.00 per cent. There is no gain in saying the fact that in addition to its impact on public health, COVID-19 and the lockdown that was undertaken beginning in March 2020 in an attempt to contain its spread has had a major economic impact that has affected all sectors of the economy. The agricultural sector and agricultural markets are no exception. Governments around the world have struggled to balance mitigating the impending food security crisis and containing the spread of COVID-19. Because online marketing can improve market performance and avoid direct person-to-person contact, it is regarded as an effective substitute for the offline agriculture market channel during COVID-19 (Jianxin Guo et al., 2022).

During the COVID-19 pandemic, digital marketing / online marketing platforms became more popular, not only for the marketing of general daily need products but also for marketing agricultural produce. Many farmers adopted social media platforms such as WhatsApp, mobile calls, Facebook, and dedicated mobile applications to sell agricultural produce, including fresh vegetables, fruits, and food grains, in local markets (Digital Technology in Agriculture, 2022).

On a mission to simplify access to quality agricultural & horticulture seeds, the Government e-Marketplace (GeM) has revamped and introduced 170 Seed categories on the portal. procured by Central/State PSUs and other governing bodies for further dissemination across the country aims to reduce time consumed in tendering processes, and stimulate transparency & accountability in government procurement while facilitating increased participation of sellers across the country. (Source: Ministry of Commerce & Industry, 2024). Implementation of online agricultural marketing in agriculture is somehow determined by the psychological status of the farmers. Attitude is one of the important psychological factors that has the potential to influence an individual's decision toward a specific object or idea (Thurstone & Chave, 1929). It acts as the determinant factor by converting covert behaviour into overt action. Attitude is a crucial determinant of farmers' intention to adopt online agricultural marketing. However, the positive attitude towards online agricultural marketing is associated with beliefs and social status. Since farmers are the main actors in technology adoption or rejection, their socio-economic status can provide meaningful insight into their adoption behaviour. Farmers' attitude significantly impacts their willingness to adopt new technologies such as online agricultural marketing. Farmers with more positive attitude toward online agricultural marketing were more likely to adopt them. Identifying the socio-economic factors influencing attitude may help to design better technology for adoption leading to increased online agricultural marketing. Insight into farmers' attitudes can guide the efficient allocation of resources (Boora et al. 2022 and Thangjam et al. 2024). Attitude being a component of behaviour depends upon the personal and socio-economic characteristics of individuals (Manstead, 2018) and so, the present study tried to tress out the socio-personal factors which influence the shaping of attitude towards online agricultural marketing.

2. Materials and Methods

During the COVID-19 pandemic, many farmers adopted online agricultural marketing platforms viz. social media, WhatsApp, dedicated mobile apps, and mobile calls. Similarly, farmers also regularly used the private economic platform viz. Amazon, Flipkart etc. For this study, farmers who had used at least one online platform at least once time for marketing their agricultural produce at district places were considered as respondents. From each of the selected districts, 30 such farmers were randomly selected. So, a total of 180 farmers from six selected districts were taken for the study.

The present study was conducted to delineate the relationship between the profile and attitude of farmers which included a survey of six districts namely Parbhani, Hingoli, Nanded, Beed, Jalna and Chatrapati Sambhajinagar of Marathwada region, Maharashtra, India. Data was collected from a total of 180 respondents from above mentioned six districts through an interview schedule. The data were collected with the help of a pre-designed interview schedule by contacting the respondents personally to get valid and complete responses. The help of FPO, progressive farmers, university faculty and extension workers were taken for obtaining data and establishing the rapport with the respondents. The socio-economic and personal characteristics were taken as the determinants which influence the attitude of individuals. Among all these, Age, Education, Size of family, Annual income, Land holding, Mass media exposure, Extension contact, Social participation, Scientific orientation, Economic motivation, Techno savviness, Risk orientation, and Possession of ICT gadgets were taken for assessing their influence on attitude considering results from previous studies (Kharmudai et al., 2018; Rajoria et al., 2018; Devaraja, 2010).



Figure 1. Research Study Area

3. Results and Discussion

Socio-personal determinants of farmers' attitude towards online agricultural marketing

This section depicts the socio-economic determinants of farmers' attitude on online agricultural marketing viz. influence of these variables on attitude was assessed. Table 1 presents coefficient of correlation (r) values between socio-personal variables and farmers' attitude towards ICT. The result shows that the variables family education, land holding, extension contact, social participation, scientific orientation, economic motivation, technosavviness, risk orientation, annual income and mass media exposure are positively and significantly associated with the attitude towards ICT tools. It means that a change in these variables will change the attitude level in the same direction. The variable namely age was negatively significant, and size of family & possession of ICT gadgets were positively non-significant with attitude of farmers towards online agricultural marketing.

Table 1. Correlation coefficient between socio-personal variables and farmers' attitude towards online agricultural marketing (N=180)

No.	Independent variables	Correlation coefficient ('r') values
1	Age	-0.204**
2	Education	0.511**
3	Size of family	0.130 ^{NS}
4	Annual income	0.153*
5	Land holding	0.200**
6	Mass media exposure	0.173*
7	Extension contact	0.201**
8	Social participation	0.208**
9	Scientific orientation	0.334**
10	Economic motivation	0.421**
11	Techno savviness	0.421**
12	Risk orientation	0.448**
13	Possession of ICT gadgets	0.085 ^{NS}

** Significant at 0.01 level of probability

* Significant at 0.05 level of probability

NS-Non significant

As evident from Table 1 was found that age is negatively significantly associated with attitude, as farmers get older, their attitude towards using online platforms for agricultural marketing tends to be less favourable. (Shankaraih and Swamy, 2012; Kabir, 2015; Naik 2018; Pudke 2018; Bhosale 2021; Ghosh et al., 2022; Mukharji et al., 2022 and Tadeipalli Yamini, 2024). Education was positive and highly significantly associated with attitude towards online agricultural marketing as a good educational level able to influence the ability to think, plan, make decisions and execute. (Bipinbhai, 2020; Rohtash Kumar et al., 2022 Mishra et al., 2021). Size of family was non-significantly associated with attitude as it doesn't affect attitude & no statistically reliable association between them. (Pudke, 2018; Rajoria et al., 2018). Annual income was positive and significant with the attitude farmers are getting benefits by selling their produce through online agricultural marketing resulting in increased annual income. (Devaraja, 2011; Raghuprasad et al., 2012; Kafura et al., 2016; Kharmudai et al., 2018; Naik, 2018; Pudke, 2018; Choudhari et al., 2019; Bipinbhai, 2020; B. Jaswanth Naik et al., 2021; Mukherjee et al. 2022; Rohtash Kumar et al. 2022). Land holding was positive and highly significantly associated with attitude towards as the amount of land a farmer owns increases, their attitude towards online agricultural marketing tends to become more favourable. (Rohtash Kumar et al., 2022 Mishra et al., 2021). Mass media exposure was positive and significantly associated with attitude might be due to continuous exposure of the respondents to various mass media sources like radio, television, newspapers, magazines and publications to become aware and gain knowledge and information about online agricultural marketing. (Shankaraih and Swamy, 2012; Kumar et al., 2017; Patel et al., 2018; Pudke, 2018; Rajoria et al., 2018; Bipinbhai, 2020 and Rohtash Kumar et al., 2022). Extension contact was positive and highly significantly associated with attitude might be due to continuous extension contact of the respondents with the various extension workers like Gramsevak, and Agril. Assistant, Agril. Supervisor, Circle Agril. Officer, Taluka Agril. Officer, Agril. Extension Officer, Agril. Officer, Subject Matter Specialist, Block Development Officer, Sub-divisional Officer and university scientists to become aware and gain knowledge and information about online agricultural marketing in their local language (Tadeipalli Yamini, 2024) and Mishra et al., 2021). Social participation was positive and highly significant with attitude because better social participation enables the respondents to share and increase interaction, knowledge, and experience, in the context of the exchange of ideas and strengthens the experiences and attitude towards online agricultural marketing (Bipinbhai, 2020), Roshan Baig et al., 2017 and Mishra et al., 2021).

Scientific orientation was positive and highly significant with attitude as more orientation of respondents towards scientific technology, and more knowledge about online agricultural marketing which affected positively attitude of respondents towards online agricultural marketing (Abdel et al. 2013 & Tadepalli Yamini, 2024). Economic motivation was positive and highly significant with attitude as respondents want more economic profit with moderate risk and it is possible by using online agricultural marketing which resulted in respondents high economic motivation (Mishra et al., 2021 & Huka, et al. 2023). Technosavviness was positive and highly significant with attitude most of the respondents are more tech-savvy and eager to use new technological tools and online platforms because of their familiar and comfortable attitude towards digital tools and online platforms for marketing their agricultural produce (Mukherji et al., 2022 & Meena et al., 2024). Risk orientation was positive and highly significant with attitude as respondents having a positive attitude towards trying new methods or technologies, even though in uncertain and failure also (Meena et al., 2024 & Bereir, 2020). Possession of ICT gadgets was non-significant with attitude as most of the respondents may own the devices but lack the skills or confidence to use them for online agricultural marketing (Pudke, 2018 & Nyamba, 2021).

4. Conclusion and Recommendations

In light findings of the study and from the personal experiences at the time of personal interviews of the respondents, the following implications have emerged for future activities and bringing desirable changes. Better planning and improvement of the attitude of farmers towards online agricultural marketing, these implications will help the concerned government organizations, the State Department of Agriculture and the State Agricultural University. It was found that independent variables namely, education, land holding, extension contact, social participation, scientific orientation, economic motivation, technosavviness, and risk orientation were positive and highly significant relationships with the attitude of farmers towards online agricultural marketing. It is therefore implied that extension workers, government organizations, the State Department of Agriculture and the State Agricultural University should consider these attributes which help to increase effective implementation of online agricultural marketing by farmers.

Action implications:

The findings of the study revealed that the majority of the respondents have a favourable attitude towards online marketing of their agricultural produce, The State Department of Agriculture and State Agricultural Universities should take the initiative to create awareness through workshop and training programmes, friendly mobile applications about online marketing platforms for the agricultural produce, developed attitude scale useful for private online marketing companies for find out the potential area for online marketing of agricultural produce.

Implications for future research:

The present study was carried out in the selected six districts of the Marathwada region with only 180 farmers' sample sizes. Similar studies may be undertaken in other remaining districts and the whole Maharashtra state with a large sample size so that the inferences drawn can be generalized to a greater extent. The scale developed for measuring the attitude of farmers towards online agricultural marketing is reliable, valid and effective which will be useful to both the researchers interested in similar types of studies in future.

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Conflict of interest

All authors declare that they have no conflict of interest.

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