Indian Journal of Economics and Business
Vol. 20 No. 2 (July-December, 2021)

http://www.ashwinanokha.com/IJEB.php

Young Farmers' Intention to Use Social Media in Marketing Agro Products: A Conceptual Framework

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Received: 08th June
Revised: 15th July 2021
Accepted: 24th July 2021

Abstract: Social media usage is significantly high among Indian farmers for social interaction and entertainment. Literature review has been done to understand the recent usage of social media in the Indian agriculture industry and around the world. Young farmers understood social media as a cost-effective and high-exposure marketing tool for selling agro products. However, the level of using social media platform is scarce. Therefore, the study aims to identify the factors that drive young farmers' intention to use social media for marketing agro products. Based on the review and objective, this study proposes a conceptual research model drawn on UTAUT framework to understand the significant influence of determinants on farmers' intention. Factors such as facilitating condition, performance expectancy, self-efficacy, effort expectancy, social influence, and sources of information were identified. This research helps research practitioners and policy makers to better understand and incentivize adoption of social media at farm level.

Keywords: Social media, Young Farmers, Marketing, Agro products.

1. Introduction

The internet along with digital and social media comprises the modern Information Communication Technologies (ICT) in the field of agriculture marketing, especially it is made affordable for farmers in developed countries. Internet penetration and access to the internet through mobile phones in rural India help farmers connect to virtual communities at a faster pace. New Media is a generic term that describes the online technologies and practices used for exchanging thoughts, experiences, perceptions, and insights (Narayan & Narayanan, 2016). Social media (SM) is a subset of New Media used to build brand awareness, reach out to existing customers, discover new audiences, and it acts as a direct channel to interact with people (Yao et al., 2019).

For years, Indian farmers have been facing difficulty in marketing their harvested produce. They were mostly forced to sell those products at an exceptionally low price to local traders (Rehman et al., 2012). Consequently, farmers were disconnected from potential consumers due to lack of marketing capabilities and infrastructure (Ranjan, 2017). SM marketing facilitates direct marketing thereof, farmers' produce agro products based on preferences, market demand, and find alternate channels to sell directly to end consumers (Abrams & Sackmann, 2014). Hence, participation of farmers in social media networking sites helps them to build relationships and communities online. Through these sites, farmers and farmer organizations can stay connected with individual followers and enhance their marketing capability. Hence, to address this issue, SM could be used as a change enabler in agricultural marketing.

Nowadays, farmers have started perceiving the use of new media, i.e., SM as an operative marketing platform to connect and collaborate with their consumers and intermediaries. Particularly, young farmers seek SM as a creative advertising tool to promote their farm products (Prayoga & Raya, 2019). Whereas Indian farmers are still in the pilot stages of using SM for marketing despite using various social networking sites. This is due to less awareness on the usage of SM for marketing agro products. Hence, the study tries to explore whether farmers have an intention of using social media because intention precedes action. Therefore, current paper attempts to respond the research questions: 1. Do farmers intend to use SM as a platform for marketing their products? 2. Are young farmers receptive to use SM for marketing agro products in addition to the entertainment and social interaction?

More sharply the conceptual paper is to realize the factors that drive farmers' intention to use SM for agro product marketing with reference to young farmers. The specific goal is to ponder the additional factors such as sources of information, and self - efficacy towards farmers' intention. Therefore, this study proposes a conceptual research model based on UTAUT framework. Therefore, the existing study intends to deliver better insights towards farmers' behaviour in using SM and thereby help agricultural extension officers, policy makers, and marketing practitioners to make sound policies for improving the knowledge towards the ways to use SM as an effective marketing tool.

2. Literature Review

This section reviews the literature on use of SM for agro products marketing. Accordingly, a comprehensive literature review was conducted using various keywords such as "marketing agro products", "farmers intention to use social media", "determinants of farmers intention", "acceptance of social media among farmers", "social media in agriculture", "digital marketing in agriculture", "new media for marketing agro products", "usage of Facebook, WhatsApp, YouTube for marketing farm products", etc. to retrieve related research papers from well-known academic databases of SAGE, Scopus, EBSCO Host, Google Scholar and Science Direct. Hence, this study has taken only those articles that directly linked its objectives.

Young Farmers and social media

India is densely populated with average age of 28.2 years till 2020. No other nation has so many youths. This has also been reflected in penetration of internet and social media in India. However, rural India registers 45 % of internet growth, which is threefold higher than urban internet usage (Fennell,

2018). Most young adults spent a significant part of their day on social media for social communication (Niland et al., 2017). Just as the use of SM has transformed how urban individuals live, learn, and communicate with each other, fundamental changes have also taken place in relation to adoption of SM among rural people (Prayoga & Raya, 2019). Social networking sites have facilitated farmers to be a part of the conversation with consumers and helped them understand and listen to consumer needs to deliver better products (Nain, 2019). Even electronic word of mouth (e-WOM) has played a vital role in formation of online networks and in the progression of value formation in the agri food sector (Sturiale & Scuderi, 2013). Hence, social media act as transparent and authentic voice to build trust between farmers and consumers in times of confusion. Also, it has presumed to be a platform for sharing stories to create emotional connections in marketing their farm products.

A study conducted in the UK found that Facebook groups and pages were popular among second-generation farmers, particularly those who intend to adopt modern technologies into their farming practice (Burbi & Hartless Rose, 2016; Shita et al., 2019). Likewise, young farmers acquire new knowledge and information through internet tools such as e-magazines, internet searches and online forums for discussion and debate. Similarly, Indian farmers have created *Whatsapp* groups to get interlinked and seek advice from experts when needed; requested the policy makers to use *Whatsapp* and Google Earth to deliver accurate information services (Thakur et al., 2017).

Usage of WhatsApp and Instagram helped Nigerian farmers to predict farmers' sales turnover (Inegbedion et al., 2020). Beyond personal use, young Sub-Sharan's farmers were shown interest in teaching their elder peers to integrate technology into their farms (O'Donnell, 2013). In a study, adoption of web and mobile applications encouraged farmers to realize reasonable prices for their products by directly selling to the customers (Engotoit, 2016). Several studies suggested that farmers preferred "learning by doing" to other learning styles (Chavas & Nauges, 2020; Milone & Ventura, 2019). As a result, information technology now allows farmer to access recorded videos and watch live streaming to gain more knowledge.

Earlier research studies indicated that the SM was used effectively for information dissemination related to extension and advisory services. However, SM was used to create communities that shared a common interest. Thus, it is vital to investigate the perspective of Indian farmers in usage of SM for a step ahead in marketing their agro products.

Research Objectives

- To understand the significance of SM usage in marketing agro products.
- To identify and explore the factors that drive farmers' intention towards use SM for marketing agro products.
- To formulate a conceptual framework based on the identified factors

3. Theoretical Background

Most dominant model in the research related to acceptance and use of technologies in an organization is Technology acceptance model (TAM). Predominantly, TAM explain the reasons that influence the behaviour of an individual to use and adopt the new system. Despite, its robustness TAM (Venkatesh et al., 2003) has its own limitations and consequence of social influence on implementation of information system was not included in the theory (Davis, 2007). Later, Venkatesh & Davis (2000) extended the model as Unified Theory of Acceptance and Use of Technology (UTAUT) and gave a comprehensive note on technology acceptance and its actual use.

UTAUT have been widely adopted to explain individuals' behaviour in various contexts, like mobile payment services (Slade et al., 2015), e-learning services (Liu et al., 2019), and learning management systems (Buabeng- Andoh & Baah, 2020). Okumus et al., (2018) stated UTAUT has high predictive power than any other theories of human behaviour. In this study, UTAUT theory is adopted to conceptualize SM for marketing agro products. Factors such as Facilitating Conditions (FC), Social Relations (SR), Effort Expectancy (ER), and Performance Expectancy (PE) are adopted. UTAUT explains how an individual use new technology after a series of multifaceted mental processes, in which intention leads to use behaviour. Subsequently, this study integrates self-efficacy and sources of information as additional determinant of farmers' intention to use social media. The Existing studies have found that individual's self-efficacy is linked with a positive attitude to usage of technology (Engotoit, 2016; Okumus et al., 2018). Thus, individuals' self-efficacy is an essential determining factor of farmers' behavioural intention to use social media.

Adoption of innovation begins with diffusion of information with potential user through personal network (i.e., direct face to face communication) and impersonal channels (i.e., indirect face to face communication) (Rogers, 1962). However, limited studies have revealed mass media and personal sources as the primary and crucial source for sharing idea or information among farmers to influence technology adoption behaviour (Cavallo et al., 2014; Caffaro et al., 2020).

Previous research revealed that individual's intention is the most appropriate measure for actual technology usage behaviour (Venkatesh et al., 2012; Okumus et al., 2018). Based on the existing literature, the extant study recommends a conceptual model to predict farmers' intention (INT) to use social media (WhatsApp, Facebook, and YouTube) as a function of Social Influence (SI), Performance Expectancy (PE), Self-Efficacy (SE), Facilitating Condition (FC), Source of Information (SoI) and Effort Expectancy (EE). Next, this study briefly explains the proposed conceptual framework and its factors under each construct.

Conceptual Framework

Based on extensive literature of theories appropriate to technology adoption, we have developed an integrated model. This conceptual model is developed based on key constructs that drive the farmers' use intention.

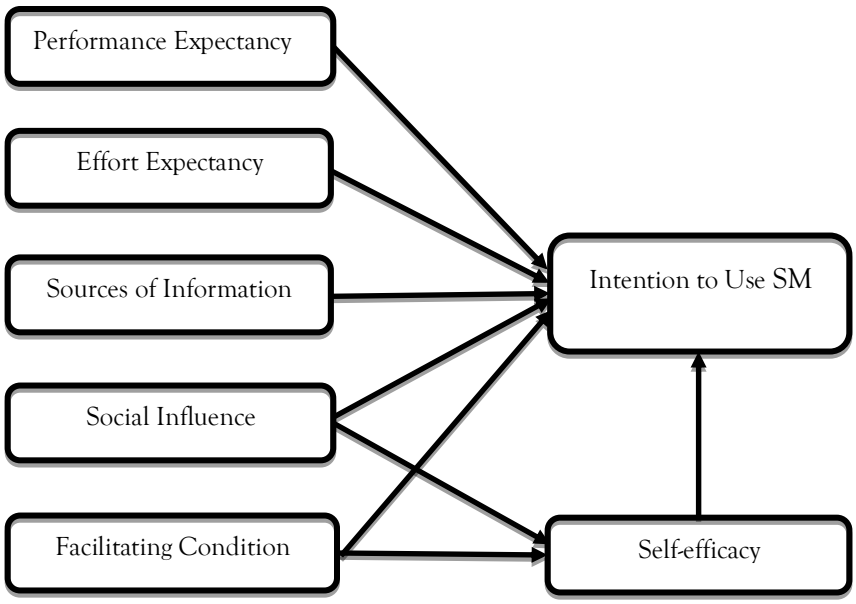

Figure 1. A Conceptual model for the farmers' intention to use SM

Performance Expectancy

Performance Expectancy (PE) is characterized as individuals trust to use technology increases one's job performance (Venkatesh et al., 2003). A system high in perceived usefulness is a result of the user's belief on use-performance relationship (Engotoit et al., 2016). Particularly, PE is considered as the extent to which a farmer trusts that usage of SM for agricultural marketing help them to get better market price. Therefore, PE has been related to perceived usefulness in the context of technological acceptance. Variables like job performance, productivity, usefulness, convenient to use and time conservation determines the behavioral intention of an individual towards using social media. Hence, the proposition is stated as:

H1 PE has a positive effect on the intention to use SM.

Effort Expectancy

EE is a vital psychological determinant of technology acceptance studies in information system. Acc. to Venkatesh et al., (2012) the magnitude to which a user trusts a particular technology for its easiness and minimum effort required to use. EE has also been in comparison with the perceived ease of use of TAM and IDT (Ghalandari, 2012). Many studies found EE has a optimistic influence on technology usage (Yang, 2010; Listyo & Lisandy, 2017). Therefore, in this study EE illustrates the effort a farmer needs to learn the ways of using SM with a view to marketing their farm products. Hence, the proposition is:

H2 EE has a positive effect on the intention to use SM.

Sources of information

An information source is a source of information which informs an individual about something. Sources of Information (SoI) is considered as a recommendation source on usage of e-books in the

academic digital library among Taiwan graduates (Lin et al., 2010). In spreading accurate information health professionals are regarded as a trusted source of information among the Korean public (Ayeh et al., 2013). Regarding agriculture, recommendation sources such as word of mouth and expert opinions are found to be a significant information source for knowledge transfer among farmers. Hence, the study incorporates various SoI i.e., personal, and impersonal channels to find direct influence on social media usage intention. Thus, the following hypothesis can be formulated as:

H3 SoIhas a positive effect on intention to use SM.

Social influence

SI is a common aspect that explains any individual's intention. An extent to which a person perceives that related people (e.g., friends, peer groups, agricultural advisory officers, and consumers) influence them to use a new practice (Taylor & Todd, 1995). In China, most of the commercial farmers are influenced by people around them to use the Internet of things-based sensors and devices for adoption of a smart irrigation system (Ayaz et al., 2019). Consequently, this research is based on the assumption that SI triggers farmers' use intention.

H4 SI has a positive effect on intention to use SM.

Facilitating condition

FC is an "Extent to which an individual assumes that technological and organizational framework facilitates the use of a system" (Venkatesh et al., 2003, p.475-478). Similarly, FC is described as a support provided to the users on interaction with new technology, like as learning from a friend or any other resource person on how to use a technique (Seneler et al., 2008). Hence, in this study rural internet connectivity, internet access, required knowledge on social networking sites, availability and affordability of smartphones are considered under FC.

H5 FC has a positive effect on intention to use SM.

Self-efficacy

Self-Efficacy (SE) reflects the belief of an individual on his or her potential to execute specific task (Bandura, 1989). A person with high SE achieves more compatibility on usage of new expertise over time with a required effort. Inexperienced users perceive new technology as complex, but the belief in one's ability to manage them have a substantial influence on acceptance and use. The direct influence of SE on behavioural intention has been empirically proven (Santos & Liguori, 2020; Kaur & Singh, 2019). The indirect effect of self-efficacy has been studied previously as a mediator between many independent and dependent variables such as transformational leadership dimensions and psychological distress (Djourova et al., 2020), personality traits and perceived stress, social norms and acceptability of vaccine (Stout et al., 2020), perceived risk and intention to reduce risk (Marafon et al., 2018). In another study computer self-efficacy has mediated organizational support, a variable of FC and computer usage (Igbaria & Iivari, 1995). Hence in this study SE has been chosen as mediator between FC and intention to use SM.

Bandura (1989) stated that social influence as an antecedent of self-efficacy, especially from the family, friends, and opinion leaders. In general, SE among farmers in developing countries were seemingly low and the influence of the social norm was comparatively high (Syan et al., 2019). Hence an individual with high self-efficacy was less influenced by people around them. Thus, the study proposes self-efficacy as a mediator between SI and intention to use social media among farmers. So, the following proposed hypotheses are:

H6 *SE will mediate the relationship between SI and intention to use SM.*

H7 *SE will mediate the relationship between FC and intention to use SM.*

H8 *SE has a positive effect on intention to use SM.*

Behavioural Intention

Most of the TAM and TRA studies have used attitude as a predominant factor to determine the behavioural intention of an individual related to technology acceptance and use (Davis, 1989). Later, attitude has proven to be excluded in the new version of a TAM series (López-Bonilla, 2017). The source of information and performance expectancy are strong influencers to overcome the unfavorable attitude of a person towards acceptance of new technology. Thus, usage of social media for marketing is linked with higher production and income. Hence, for better understanding of farmers' behavioural intention on social media usage as a modern marketing tool, factors such as SoI, PE, FC, SE, EE and SI are adopted.

4. Conclusion

Modern day marketing communication technologies are capitalizing a vast amount of information to avail opportunities to rural societies. However, among these, the user generated media is unique because of the prospective opportunities they offer for marketing agro products. *WhatsApp*, *Facebook* and *YouTube* are the mediums that facilitate them to build virtual relationship with consumers and other stakeholders in agriculture industry. Linking farmers to market has been one of the objectives of all major initiatives undertaken in the Indian Agriculture sector. In such market led reform, inclusion of consumers with communication technology become important to help farmers to get high returns. Flourishing of rural farmer markets as well as the drawing large number of customers through social media sites are the biggest advantage of using social media in marketing. This study has illustrated theoretical evidence to describe the relationship between the factors prompting farmers' intent to use SM for marketing agro products through extensive literature review.

Usage of SM for marketing agro products in many ways would contribute to rapid economic growth as well as improving the standard of living of farmers who have been lost for long in the process of modernization of markets after the advent of ICT tools. Especially, the study on intention of using social media requires a deeper analysis for moving forward in the rural market. The roadblocks between the intention of using SM and actually using it for marketing have to be cleared to realize the growth of the rural market. The relationship of determinants in this study helps farmers, policy makers, academia, and agro enterprises to consider the utility and value of using new media such as SM for marketing.

5. Limitations and Future Direction of Research

This study is limited only to a conceptual comprehending of farmers' intention to use SM for marketing agro products in Indian context. Another limitation is that factors explored in the study are not based on empirical investigation. Also, intention to use the SM model proposed is purely based on available literature. In a systematic examination of literature on UTAUT revealed that PE and EE were more likely related with intention in comparison to actual use. Moreover, the usage of SM for marketing is limited among Indian farmers. In this connection, the dependent variables considered in this study should be considered as an advantage. This research has discussed the various determinants of farmers' intention. Future research recommends to test and validate the proposed hypothesis to enhance the understanding on farmers' adoption behaviour of various social media sites for marketing their agro products.

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