



A Study On Challenges Faced By Farmers Using E-Commerce In Agriculture Sector In Kerala

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ABSTRACT

The implementation of e-commerce in agriculture has great potential to enhance farmers' market access and profitability. Nevertheless, farmers in the Indian state of Kerala have distinctive obstacles when it comes to assimilating into the digital economy. This study examines the difficulties encountered by farmers in Kerala using a descriptive analytic methodology. The study centres on five primary domains: 1) Digital Literacy and Infrastructure: Assessing the constraints related to farmers' internet accessibility, smartphone utilisation, and technical proficiency. 2) Analysing the difficulties related to effectively shipping and preserving the quality of perishable agricultural products through e-commerce channels. 3) Examining the absence of clear and open pricing systems and the possibility of being taken advantage of by online middlemen. 4) Investigating farmers' concerns regarding trust and security, specifically related to online transactions, data security, and guaranteeing equitable payment procedures. 5) Evaluating the efficacy of current government initiatives and support systems in facilitating the adoption of e-commerce among farmers in Kerala. The study employs data from agricultural reports, government surveys, and industry publications to construct a thorough depiction of the difficulties encountered by farmers. The research seeks to identify these obstacles in order to provide policymakers and stakeholders with valuable insights for designing specific solutions that can address the digital gap and enable farmers in Kerala to fully utilise e-commerce in the agriculture industry.

Key Words: E-commerce, Agriculture, Kerala, Farmers, Challenges

INTRODUCTION

Kerala, a state known for its lush scenery and prosperous farming traditions, has a substantial number of small and marginalised farmers. These farmers, who frequently have small plots of land, encounter difficulties in obtaining equitable rates for their varied crops. The conventional agricultural marketing channels, which involve several intermediaries and lengthy supply chains, often lead to minimal revenues for small producers. Nevertheless, the current upswing of e-commerce platforms offers a hopeful opportunity for strengthening Kerala's agriculture economy. The objective of this study is to investigate the difficulties encountered by farmers in Kerala when using e-commerce platforms to sell agricultural products. By recognising these obstacles, we can strive to establish a more conducive environment that enables the seamless incorporation of e-commerce into the agriculture sector of the state.

The digital gap is a significant obstacle that Kerala's farmers encounter when trying to make use of e-commerce platforms. A considerable segment of the agricultural community, especially in isolated regions, lacks reliable internet access and fundamental digital literacy abilities. This impedes their capacity to browse online marketplaces, comprehend e-commerce functionalities, and proficiently list and promote their products. Moreover, the limited availability of cellphones and computers significantly hinders their involvement in the digital agriculture economy.

Based to a 2021 study conducted by the Kerala State IT Mission, a mere 42% of rural homes in the state possess internet connectivity. This emphasises the notable disparity in access to digital technology that must be resolved in order to effectively implement e-commerce in the agricultural sector. Moreover, a 2020 research by the National Sample Survey Organisation (NSSO) revealed that a mere 21.6% of agricultural households in India own a computer. This underscores the urgent requirement for the development of infrastructure and the implementation of digital literacy programmes that are specifically tailored to benefit farmers.

Another issue pertains to the standardisation of products and the regulation of their quality. E-commerce platforms frequently demand a consistent level of product quality and strict adherence to certain grading criteria. Nevertheless, small and marginal farmers, who possess limited resources and infrastructure, may encounter difficulties in fulfilling these standards. Moreover, the fact that numerous agricultural items are prone to spoilage presents logistical obstacles for online distribution, necessitating the presence of a strong cold chain infrastructure to guarantee the freshness and quality of the products when they reach consumers.

Measures are being taken to tackle these difficulties. Efforts focused on establishing Farmer Producer Organisations (FPOs) can facilitate collective marketing, implementation of quality control measures, and standardisation of agricultural produce. In addition, partnerships between the government and private sector can result in the creation of effective cold chain networks, which can enable the online transportation of perishable agricultural goods.

Farmers in the e-commerce ecosystem may be at a disadvantage due to their limited access to real-time market information and clear pricing procedures. Farmers frequently face a dearth of dependable information regarding consumer preferences, current market rates, and seasonal variations in demand. This might pose challenges for them in establishing competitive pricing for their items and potentially expose them to abuse by online platforms or unethical purchasers.

REVIEW OF LITERATURE

Electronic Commerce, sometimes known as e-commerce, encompasses any commercial activities conducted via electronic means, particularly through computer networks. Information and Communication Technologies (ICTs) assist in redirecting the extension system towards promoting the comprehensive growth of small agricultural production systems. ICTs play a vital role in achieving sustainable agricultural development when used to document the practices of both organic and conventional farming.

Fidowaty and Supriadi (2020) found that government plans aimed at enhancing the financial condition of farmers through the use of e-commerce innovations have not yielded any significant results. A significant number of farmers continue to face challenges in efficiently utilising e-commerce and associated technology. The government's efforts to enhance Indonesian agricultural yields were effective. E-commerce is expected to provide support for agricultural product marketing. The primary hindrances are the government's deficient efforts in promoting socialisation and the farmers' lack of knowledge in effectively utilising technology for marketing their crops.

Upadhyaya et al.,(2019) researchers attempted to develop specific techniques focused on location to address the digital divide among farmers. The study clearly demonstrates that the concerns of different farming communities differ. The commonly used strategy of "One size fits all" is not suitable in this context. In order to successfully implement ICT-based farming methods, it is crucial to effectively address the issue of the digital divide. Strategies should be developed based on a thorough analysis of the digital environment in the area.

Chen and Zhu (2018) This study investigates the distributional characteristics and patterns of research articles on agricultural economics in China, encompassing information about the authors, themes, subtopics, and source journals. China has performed substantial and expanding research in the field of agricultural economics during the past few decades. According to certain individuals, the rural land issue was deemed the most significant problem. Furthermore, comprehensive research was conducted on the problems associated with industrialization in rural and impoverished regions. Additional investigation is required about important matters concerning agricultural markets and commerce, rural jobs, and food safety.

Manish Mahant, et al, (2012) state that there is an increasing utilisation of information and communication technology (ICT) in the field of agriculture. E-agricultural refers to the concept, creation, advancement, experimentation, and execution of innovative information and communication technology (ICT) applications in rural regions, with a primary focus on agriculture. ICT, consisting of three fundamental technologies, has the potential to greatly contribute to the preservation of information assets. These technologies are employed for the purpose of overseeing, manipulating, and transmitting data, knowledge, and information.

Awais and Samin (2012) demonstrate that the internet has effectively established a worldwide community. The utilisation of the Internet has reduced geographical distances and brought people back together. Commerce is a fundamental aspect of a country's economy, and its strength can be enhanced through the use of technological tools, with e-commerce being a vital element. Privacy is an essential element of e-commerce that enhances both competitive advantage and consumer trust. With the growing significance of e-commerce in the business world, it facilitates the connection between merchants and potential customers by a simple click, resulting in time and cost savings.

OBJECTIVES

- To study the level of digital literacy and internet access among farmers in Kerala.
- To investigate the current access to market information and pricing structures for agricultural products in Kerala
- To evaluate the awareness level of farmers regarding opportunities in E-commerce.
- To study the advantages of E-commerce in agriculture.

SIGNIFICANCE OF THE STUDY

E-commerce offers a great opportunity to empower farmers in Kerala by providing a direct connection to consumers and the potential for increased income. Nevertheless, conventional marketing methods can expose small and marginalised farmers to vulnerability. This study aims to investigate the obstacles encountered by farmers in Kerala when utilising e-

commerce platforms for selling agricultural products.

This research is highly valuable for multiple reasons. Firstly, it evaluates the degree of digital literacy and internet connectivity among farmers, exposing the digital gap that impedes broader adoption of e-commerce. Additionally, it examines the existing availability of market information and pricing systems, pinpointing any potential deficiencies that may put farmers at a disadvantage. Moreover, through assessing the level of farmer's understanding of e-commerce prospects, the research might provide valuable insights for focused educational initiatives. Examining the possible advantages of e-commerce in the particular setting of Kerala emphasises the possibilities for enhanced market penetration, price attainment, and economic prosperity. Examining the possible function of Farmer Producer Organisations (FPOs) involves finding ways to overcome obstacles and promote a more effective incorporation of e-commerce within Kerala's agricultural industry.

Ultimately, this study has the capacity to have a substantial impact by pinpointing crucial obstacles and investigating new prospects. It can provide valuable insights for creating specific programmes that address the digital gap, expand farmers' market access, and eventually improve their economic well-being by leveraging the transformative potential of e-commerce.

RESEARCH METHODOLOGY

The objective of this study paper is to examine the obstacles encountered by farmers in utilising e-commerce methods for marketing their products. A sample of farmers from specific districts in Kerala was chosen for the study. Both primary and secondary data are utilised for the study. The primary data was gathered via a structured questionnaire, while the secondary data was obtained from numerous journals, papers, and other sources. Statistical methods such as percentages, graphs, arithmetic mean, and Likert scale were utilised. This study spans a duration of three months, specifically from April to June 2023.

ANALYSIS AND INTERPRETATION

Age Wise Classification of Farmers:

age	respondents	percentage
25-35	35	17.5
35-45	45	22.5
45-55	65	32.5
55-65	55	27.5
TOTAL	200	100

Source: Primary Data

It is clear from the table that majority of farmers are aged between 45 and 55 (32.5%). 27.5% are aged between 55 and 65, 22.5 % between 35 and 45, 17.5% between 25 and 35.

Awareness Level of Farmers Regarding Opportunities of E-Commerce:

	respondents	percentage
Aware	45	22.5
Fully Aware	24	12
Not Fully Aware	92	46
Not Aware	20	10
Prefer Not to Say	19	9.5
Total	200	100

Source: Primary Data

Table shows that the awareness level of farmers regarding opportunities of e-commerce. 46% of the farmers are not fully aware about e-commerce opportunities and 10% are not aware. 22.5% of the respondents are aware, 12% are fully aware and remaining 9.5% of farmers prefer not to say.

Challenges Faced by Farmers Using E-Commerce in Agriculture:

challenges	Strongly agree	agree	neutral	disagree	Strongly disagree	total
Lack of storage facilities	90	80	15	10	5	200
Improper Pricing	70	95	25	7	3	200
Lack of computer literacy and	65	100	20	9	6	200

technical devices						
Perishable nature of Product	72	95	20	6	7	200
Difficulty in delivery	55	110	15	12	8	200

Weighted mean of Challenges faced by Farmers using E-Commerce in Agriculture:

challenges	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree	total weighted score	Mean score	remark
Lack of storage facilities	450	320	45	20	5	840	4.2	agree
Improper Pricing	350	380	75	14	3	822	4.11	agree
Lack of computer literacy and technical devices	325	400	60	18	6	809	4.04	agree
Perishable nature of Product	360	380	60	12	7	819	4.09	agree
Difficulty in delivery	275	440	45	24	8	792	3.96	agree

From the above tables, we can point out the challenges faced by farmers using e-commerce in agriculture sector. Farmers agree that there is lack of storage facilities with mean score of 4.2, there is improper pricing with mean score of 4.11, there is lack of computer literacy and technical devices with mean score of 4.04, perishable nature of products with mean score of 4.09 and difficulty in delivery with mean score of 3.96.

FINDINGS

- ◆ Majority of farmers are aged between 45 and 55 (32.5%).
- ◆ Majority of farmers (80%) earn below Rs.22000 per month.
- ◆ Only 10.9% of the respondents are fully aware about e-commerce opportunities.
- ◆ Farmers agree that there is a lack of storage facilities, improper pricing, lack of computer literacy, and perishable nature of products as the major challenges of Farmers.
- ◆ The study's findings indicate that the most common ICT instruments that farmers use and are willing to utilize for personal and professional activities are television, radio, mobile phones, and landlines. The most prominent impediment to farmers employing ICT is their fear of adopting new technology owing to ignorance. To apply ICT to rural agricultural, the other major difficulties to be solved are high equipment costs, technology, and language barriers.

SUGGESTIONS

This study reveals that farmers in Kerala state and they are only just beginning to use e-commerce. It has been widely utilized to train people in farming techniques, and many farmers receive training on a regular basis. But there is a big difference between learning and actually doing. Poor internet connectivity, high fees charged by private internet players, and a lack of organisations like the Indian Tobacco Company's e-Choupal program—which outperforms ITC's Agri business division in North India—are the barriers and constraints. Through computer education programmes like awareness camps, short-term courses, and farmers internet clubs, the desire to accept and apply modern technology in farming techniques will grow in popularity. Government must take steps to support farmers who form about 50% of the entire population here. There are several Programmes and schemes in support of farmers. Government must see that these schemes reach farmers and not find yourself in huge scams. Farmers should be made aware to using e-commerce opportunities in marketing their products, they must tend technical support and aids from government machinery. Their problems should be identified and actions should be taken accordingly. Youngsters should be motivated to try agriculture. They need to be motivated to involve themselves in agriculture. For that, financial security should be ensured.

CONCLUSIONS

After careful examination of the agricultural sector in India, it is evident that there have been signs of growth in the past 2 years. The contribution of agriculture to the Gross Domestic Product (GDP) has reached around 20% during the 2020-21 period, marking the first time in the last 17 years. The expansion of agricultural operations can be attributed primarily to technological developments in the industry. Advancements in technology, such as sensors, devices, machinery, and data technology, have had a significant impact on agriculture. The advent of Information Technology has brought about a substantial shift in the farming and agriculture industry. Customised online retail platforms and marketplaces offer

agricultural supplies such as seeds, fertilisers, and equipment that facilitate the cultivation of crops on a big scale and with minimal effort for farmers. On the contrary, educational portals assist farmers in staying informed about new farming practices that enhance the agricultural sector's contributions to the economy. Given the rapid expansion of the digital economy and its impact on various business activities, it is crucial to consider the suggested solutions for the aforementioned issues and challenges faced by e-commerce businesses. While e-commerce enterprises can vary in nature, they generally encounter similar problems and obstacles. The given text is not clear or complete. Please provide more information or context.

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