



A Study On Usage Of E-Commerce In Agricultural Sector During Covid 19 With Special Reference To Thanjavur- Dist (Tn)

Dr Veeramani G¹ Ms. V.Suganya²

¹Assistant Professor, Department of Business Administration, Vel Tech Ranga Sanku Arts College Avadi Chennai. (ATS 496)

²Assistant Professor, Department of Commerce, Vel Tech Ranga Sanku Arts College Avadi Chennai. (ATS 538.)

Corresponding Author- Dr Veeramani G

Email: veeramanig10@gmail.com

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Abstract

Any nation's total development can be solved by agriculture. People who engage in any form of agricultural business continue to use the internet more and more. All towns have been impacted by the COVID 19 health issue. Frontline Countries place a high priority on health responders in order to save the lives of those who are afflicted with this sickness. After the Coronavirus outbreak, the government acted to address the unusual circumstance. In order to adequately control the virus epidemic, India first scheduled a three-week nationwide lockdown till the middle of April. How Indian farmers respond to the problem in these trying times, and what steps the government is taking to assist farmers all around the nation. The study's major goal is to examine how the agricultural industry was affected by e-commerce during the Covid 19 outbreak. Samples from farmers in the Thanjavur delta districts were used in the investigation. Examining the e-commerce sources chosen for the farm industry, the justifications for doing so, and the overall satisfaction with how e-commerce was used in the agriculture sector in 2018–19 are the goals of the study. The outcome shows that farmers began to gain from using e-commerce in their farming. The study's conclusions recommend that the government take a little more initiative in educating them and providing them with agricultural inputs with subsidies.

Keywords: Impact of COVID 19, E-Commerce Delta Districts of Tamil Nadu, Agricultural sector

Introduction

Many businesses began looking for remedies to counteract the impacts of COVID-19. The term "new normal" Globally, COVID 19 altered the shift to a digital future. Information technology advancements now underway have had significant economic effects. One of the issues that the COVID 19 epidemic brought up for the agriculture e-commerce industry. One of the most beneficial applications of information technology is e-commerce, which offers many benefits such as global trade, the elimination of time and space restrictions, lower resource purchase costs, higher sales, simple information access, and a crucial decrease in transaction costs and time. Obtaining raw resources, marketing, and customer satisfaction are some of the challenges

faced by agricultural industry. Despite the fact that agriculture generates a large portion of the world's overall income, farmers' income is generally modest, and their earnings occasionally dodder on the brink of zero or even the opposite.

Agriculture E-Commerce

E-commerce has significantly impacted the agriculture industry. The internet is becoming more and more commonplace among consumers today. Some individuals use irrigation and agriculture on the internet. The usage of hardware and software is becoming more and more apparent to farmers. The internet is a must for both parties—the buyer and, consequently, the seller—to conduct business.

Review Of Literature

The writers of Zeng et al. (2017) took into account how internal and external factors affecting agricultural food e-commerce are adopted at the company level. They talked about the five standard e-commerce models that are used so frequently today. At the firm level, they found four categories of adopters: agribusiness enterprises, e-commerce firms, agricultural cooperatives, and individual farmers. The adoption and growth of e-commerce, the authors concluded, is a contemporary method of impacting food systems and smallholders' access to markets.

This case study by Carpio et al. (2013) covers the market makers. A market makers producer logic model was developed by the authors to represent inputs and outputs in both the long and short terms. They looked at a wide range of business types that participate in market makers. They assessed how market makers affected farmers' marketplaces and producers. They made recommendations for future e-commerce development and assessment.

Authors Nadarajan and Ismail (2011) talked about the use of e-commerce elements in agriculture and the framework for e-commerce in rural agriculture. Six characteristics of the agricultural e-commerce application were covered in the study. The writers included agricultural marketing strategies as well as the use of internet trade exchange platforms in their discussion of how to increase sales and marketing for the supply chain and the efficiency of agricultural products.

Research Gap

The research hole found is that there aren't many studies looking at the advantages and drawbacks of e-commerce adoption in the agriculture sector in 2018–19. With a few additional examples, the study attempts to fill the knowledge gap.

Data Analysis And Interpretation

Table 1. Tabular representation of Demographic factors which are considered for the study

Demographic factors	Objects	No. of Answerers	Valid Percentage
Gender	Male	188	59
	Female	132	41
	Total	320	100

A few objectives were formulated on the basis of this literature and research gap.

Scope Of The Study

The analysis of the services provided by E-Commerce to the agriculture industry in the Thanjavur delta Districts constitutes the exclusive focus of the study. Because of Covid-19, information was acquired from 320 farmers via telephone survey and from a few through personal contact. The information was gathered in August 2021. There are a few topics covered, including influence, role, advantages, and restrictions.

Objectives Of The Study

1. To examine the impact of e-commerce adoption on the agricultural sector in Delta Districts during COVID-19.
2. The report illustrates how e-commerce usage has impacted the agricultural industry.
3. The study examines the advantages and disadvantages of e-commerce in the agricultural sector in the years 2018 and 2019.

Hypothesis:

1. The adoption of e-commerce had no discernible impact on the farm industry in COVID-19.
2. During ovid-19, e-commerce had no appreciable impact on benefits for the agricultural sector.
3. During COVID-19, e-commerce had no appreciable impact on restrictions imposed on the agricultural industry.

Sample Size

The farmers of Tamil Nadu's Thanjavur District make up the study's population. Responses were obtained from 320 farmers in Tamil Nadu's Thanjavur District (delta) as gathering data from farmers became extremely difficult due to the epidemic. A convenience random selection strategy was applied for the current paper. With the aid of SPSS, tools like percentage analysis and Chi-Square were applied.

Age	18-25 years	42	13
	26-30 years	88	28
	31-40 years	102	32
	41-50 years	54	17
	51-60 years	8	3
	60+ years	26	8
	Total	320	100
Educational qualification	Post graduate	12	03
	Under graduate	82	26
	Secondary	76	24
	Primary	54	17
	Others	96	30
	Total	320	100
Period of using e-commerce in agriculture sector	Less than 1 year	44	14
	1-2 years	96	30
	2-3 years	104	32
	3-4 years	58	18
	Above 4 years	18	6
	Total	320	100
Marital Status	Married	196	61
	Unmarried	124	39
	Total	320	100
E-commerce sources selected for agriculture sector	Amazon	140	44
	Flipkart	98	31
	Snapdeal	46	14
	Shopify	16	5
	eBay	8	3
	Others	10	3
	Total	320	100

Interpretation: The demographic characteristics of the respondents are shown in Table 1; there were 320 respondents in total. Out of the overall sample size, 41% of the samples came from the female population and 59% of the respondents are male. When compared to female farmers, the male farmers are more active in farming. But compared to prior decades, the number of female farmers is growing. The bulk of them are between the ages of 31 and 40, followed by 26 and 30.

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This demonstrates the widespread interest in farming among young people. Few farmers have completed their secondary education, while the majority of farmers have obtained their undergraduate degrees. Many people turned to agriculture during the Covid era due to a lack of employment opportunities. For two to three years, then for one to two years, 32% of farmers use e-commerce in agriculture. 39% of respondents are single, compared to 61% who are

married. The two main sources used for the agriculture sector are Amazon and Flipkart.

Table 2. Reasons for using e-commerce in agriculture

Reasons for using e-commerce in agriculture	Number	Percentage
Eradicate intermediaries	68	21
Improves income to the farmers	74	23
Decreases wastage	86	27
Providing fresh products to the customers	92	29
Total	320	100

Interpretation: Table 2 represents the reasons for using e-commerce in the agriculture sector. Many of the farmers decided that providing fresh

commodities to the customers and followed by decreasing wastage. Later it improves income to the farmers and eradicates intermediaries.

Table 3. Overall satisfaction on utilization of e-commerce in agriculture during covid-19

Overall satisfaction on utilization of e-commerce in agriculture sector after covid-19	Number	Percentage
Very satisfied	186	58
Satisfied	80	25
Neutral	36	11
Dissatisfied	18	6
Total	320	100

Interpretation: Out of 320 farmers 58% of farmers are extremely fulfilled with the overall satisfaction on utilization of e-commerce in the agriculture sector

during covid-19, and few 25% respondents are satisfied. Among the total farmers, 6% of them are dissatisfied with the services.

Table 4. Impact of e-commerce adoption on agriculture sector during covid-19
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	32.393 ^a	32	.447
Likelihood Ratio	37.630	32	.227
Linear-by-Linear Association	7.847	1	.005
N of Valid Cases	320		

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.450	.447
	Cramer's V	.225	.447
N of Valid Cases		320	

Interpretation: Chi-Square is a single number that quantifies the degree of divergence between the actual and predicted values. In this instance, we can draw the conclusion that there is no correlation between the variables. Given that p values of 0.447 are higher than 0.05. At a 5% level of significance, the alternative hypothesis is rejected and the null hypothesis is accepted, making the

power of the variable alliance very weak. The adoption of e-commerce in the agriculture industry during COVID-19 did not change significantly during COVID-19, the agricultural sector was affected by e-commerce.

Impact Of E-Commerce On Agricultural Sector During Covid- 19

In the past few decades, e-commerce has had a huge impact on the agriculture

sector. Since the Coronavirus attack, the government has prospered in a number of ways, contributing to the pandemic crisis. Following the statewide lockdown, the Indian Finance Minister announced and declared an INR 1.7 trillion package, with Rs 2000 going to farmer bank accounts to support farmers under the PM-KISAN programme, to protect the vulnerable groups, including farmers. Agricultural e-commerce assisted farmers in removing middlemen, which decreased wastage and improved income for the farmers. They are able to provide customers with fresh goods.

Additional grain allotments to the registered beneficiaries of the Pradhan Mantri Garib Kalyan Yojana (Prime Minister Scheme for the Welfare of the Poor) were also announced for the following three years in order to address the needs of the population that is weak and destructible. The PM-CARES (Prime Minister Citizens Assistance and Relief in Emergencies) fund was established separately to provide financial and food aid to people working in the unorganized economy, preferably migrant workers. The Indian Council of Agriculture Research (ICAR) released state-specific advice for farmers during the lockdown. The advice also included alternative harvesting and threshing procedures for different rabi (winter-sown) crops, as well as post-harvest handling, storage, and marketing procedures. The "strain of debt servicing" related to COVID 19 was also made clear in the precise steps that the RBI announced. Banking institutions further provided agricultural loans and crop loans for a three-month moratorium with a 3 percent interest rate discount for crops up to Rs 3 lakh.

Role Of E-Commerce On Agricultural Sector During Covid-19

1. Farmers' purchases were made simple by the quick use of digital technology, such as digital payments.
2. E-commerce platforms have expedited the use of digital payments and consumer-used online payments among small holder farmers as a result of meeting constraints and social exclusion.

3. Even in this epidemic condition, e-commerce is crucial for farmers to expand and market their products internationally.
4. By the end of June 2021, several measures had been expanded, and it had been seen that the use of E-commerce in the agricultural sector had increased.
5. The E-commerce models have been improved to help firms function better in this pandemic circumstance.
6. During COVID-19, a new collaboration boom has expanded.
7. During the pandemic, there was a considerable demand for and order for organic items that were received at the market through digital channels without any big marketing initiatives.
8. During this time, farmers can sell their goods directly to consumers without the use of middlemen.
9. With the use of e-commerce during the epidemic, getting raw supplies like seeds, fertilizers, and insecticides has become simple for the farmers.
10. Customers were able to purchase agricultural products straight from the farm thanks to e-commerce.
11. Several organizations were shut down in the midst of this lockdown. Customers began turning to online shopping to fulfil their needs. Farmers that use e-commerce to sell directly to clients without the use of middlemen benefited from this.

Benefits Of E-Commerce On Agriculture After Covid-19

1. Farmers' efforts can be managed by using e-commerce.
2. By utilising e-commerce in farming, it is a method that saves the farmers' time.
3. E-commerce aided farmers in their search for machinery that can replace human labourers in tasks like planting seeds, harvesting crops, and pulling weeds.
4. Improved irrigation technology is number six.
5. Farmers improved their marketing efforts and pricing exposure.

6. For farmers, online trading and E-Commerce offer a wide range of amenities.
7. Farmers began producing goods organically as consumers began placing a higher focus on healthy items.

Restrictions To The Study

Because of their lack of practical experience and the epidemic conditions, the farmers were unable to operate the machinery safely. Because most farmers lack literacy, it took them longer to comprehend how to utilise e-commerce, and there may not be adequate internet in villages, the cost of maintenance increased.

Conclusion

Many farmers adhere to the belief that offering clients fresh products will reduce waste. Later, it increases farmer revenue and eliminates middlemen. The majority of farmers are highly happy with how well e-commerce is being used in the agriculture industry overall. Analysis shows that there was little change in the use of e-commerce in the agricultural industry from COVID-19. The findings show that there is a substantial difference in the adoption of e-commerce on the advantages of the agriculture sector, but that e-commerce had no meaningful impact on the industry's limitations in COVID-19. Farmers' efforts are reduced, time is saved, marketing and visibility are improved, and products are sold directly to customers, all of which contribute to the agriculture sector's success in 2018 and 2019. The limits of the agriculture industry in COVID-19 are significantly influenced by factors including high maintenance costs, a lack of expertise, an unsuitable market, and a lack of suppliers.

We can assist farmers in keeping up with global events by improving the technology utilised in agriculture. Although it may have certain disadvantages, technology often seems to offer advantages that are increased. By providing farmers with a better platform and educating them about the drawback's solutions, we could, however, narrow the gap between these drawbacks. When initiatives are

successfully implemented, our agricultural sector will undergo a significant change, raising the farmers' standard of living. As was mentioned, when farmers are properly instructed in the use of e-commerce, which can be used to replace the traditional equipment, farming dramatically improves. The government needs to implement preventative measures and train farmers to use e-commerce in this pandemic.

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