



## A Study on Fair Prices on Sustainable Agriculture Product And Farmers Awareness On SCM With Reference To Sulur Taluk

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### ABSTRACT

This study aims to investigate fair pricing mechanisms for sustainable agriculture products and the level of awareness among farmers regarding supply chain management (SCM) practices. With sustainability becoming increasingly vital in the agricultural sector, understanding fair pricing dynamics and enhancing farmer knowledge of SCM can foster equitable distribution of profits and promote environmentally friendly practices. Through empirical research and surveys, this study seeks to identify factors influencing fair pricing, assess farmer understanding of SCM concepts, and propose strategies to enhance fair pricing mechanisms and farmer awareness in SCM for sustainable agriculture.

**Keywords:** Fair prices, Sustainable agriculture product, Supply chain management, Farmers awareness on supply chain management.

### I. INTRODUCTION

In the realm of modern agriculture, the concept of sustainability has emerged as a guiding principle, advocating for practices that promote environmental stewardship, social equity, and economic viability. Central to this ethos is the notion of fair pricing, which seeks to ensure that farmers receive just compensation for their efforts while also addressing the broader implications of supply chain dynamics. This study endeavors to delve into the intricate relationship between fair pricing and sustainable agriculture, with a specific focus on the awareness levels of farmers regarding Supply Chain Management (SCM). By examining the interplay of these factors, we aim to elucidate

the challenges and opportunities inherent in creating a more equitable agricultural system.

The significance of fair pricing cannot be overstated, particularly in the context of sustainable agriculture. Farmers who adopt eco-friendly practices often incur higher production costs, ranging from investments in organic inputs to labor-intensive cultivation methods. Yet, the market dynamics frequently fail to reflect these added expenses, resulting in marginalized returns for these conscientious producers. Consequently, fair pricing mechanisms become essential not only for the economic well-being of farmers but also for the long-term viability of sustainable agriculture as a whole.

The supply chains of different agricultural commodities in India, however, are fraught with challenges stemming from the inherent problems of the agriculture sector. The agri supply chain system of the country is determined by different sartorial issues like dominance of small/ marginal farmers, fragmented supply chains, absence of scale economies, low level of processing/value addition, inadequacy of marketing infrastructure etc. Early processing-based supply chain management success included improved relationships between warehousing and transportation within companies as a result of reduced inventory and better response time to customer requests for products and services.

### 1.2 STATEMENT OF THE PROBLEM

The project aims to address the challenges faced by local farmers in obtaining fair prices for their produce and promoting sustainable agriculture. It will focus on developing a robust supply chain that enhances transparency,



efficiency, and equitable distribution, ultimately empowering farmers and fostering a more sustainable agricultural process. Farmers engaged in sustainable agriculture often encounter difficulties in obtaining fair prices for their products. This issue is exacerbated by various factors such as market volatility, intermediary exploitation, and lack of transparent pricing mechanisms. Consequently, farmers' incomes are adversely affected, posing a threat to their livelihoods and sustainability efforts.

### 1.3 OBJECTIVES

1. To study the socio economic factors of the sample respondents of the farmers in sulur taluk.
2. To know about the farmers awareness on latest technology in supply chain development.
3. To examine the satisfaction level of farmers in supply chain development in agriculture.

### 1.4 LIMITATIONS OF THE STUDY

1. This study is limited by time schedule.
2. The survey has been conducted only on 150 respondents.
3. The study is restricted to Sulur taluk only.
4. All the findings and observation related to services are purely based on the Respondents answer.

### 1.5 SCOPE OF THE STUDY

This study knows about the farmer's latest technology in supply chain development and knows the fair prices of sustainable agriculture product. It also reveals the awareness level of farmers in agricultural process. This study is to comprehensively analyze the farmer's perspective regarding awareness on supply chain management with modern technologies awareness level.

### 1.6 REVIEW OF LITREATURE

2 **Ghai (2022)**<sup>1</sup>, conducted a descriptive study on the financial aspects of the components of the ASC. Research has advocated the idea that all components of the supply chain need to be linked together and cooperate by sharing ethical benefits among themselves to maintain business through coexistence. In addition, the management of the value chain network should focus on linking the stakeholders closely and sharing, so that the network becomes sustainable, and the process of adding value and delivering become ethical. In the study, the researcher highlighted the key value chain activities in the context of agricultural products and showed the importance of value chain

financing that required the attention of donor companies at the national and regional levels.

3 **Rota et al., (2018)**<sup>2</sup>, Agriculture plays a major role in maintaining consumers' health, engaging in economic growth and ensuring a reduction in the impact on the environment. Therefore, sustainability is very important to maintain the value, awareness, society and business reputation as well as to enhance the business environment and cooperation in the supply chain. In addition, the implementation of sustainability in the agricultural supply chain can be considered as an effective way to engage stakeholders to cooperate to achieve the common goals.

4 **Noha M. Galal et al. (2022)**<sup>3</sup>, in developing countries, where the supply chain often requires high-skilled workers and when environmental regulations are still in place, both social and environmental aspects need to be addressed. To achieve sustainability goals, the coordination among supply chain actors is essential. In order to maintain their position and role in the supply chain, each member must adhere to the environmental and social objectives, while the competitiveness ability will be achieved through the fulfillment of customer requirements and economic aspects. The failure of a stage or actor in the supply chain will affect the overall performance and competitiveness of the supply chain system. Developing countries are facing challenges because their economic benefits are dependent on natural resources.

5 **Basso and Antle, (2021)**<sup>4</sup>, the agricultural sector increasingly relies on new digital technologies such as precision farming, the internet of things, remote sensing, unmanned aerial vehicles, data-driven applications, artificial intelligence, digital twins, robotics and many more. Moreover, digital technologies transform food value chain interactions, governance systems and communication platforms.

6 **Vorley (2021)**<sup>5</sup>, has argued that the agricultural market is undergoing rapid change, with the closed commodity chain rapidly replacing the wholesale or spot markets. The highly concentrated food processing, retail and food service industries at the end of this chain are having an increasingly important impact on decisions made on the farm. Processors and retailers require stringent quality, compliance with standards and codes of conduct and post- production services from suppliers. The reality of sustainability requires a high degree of appreciation for the control of the agricultural value chain and a rapid shift in the balance of power from the government



to the company. Small-size peasantry and family farming are protecting their benefits under these systems. The appropriate conditions of government policy, information technology, farmer organizations and corporate responsibility can support fair trade between agribusinesses and small-size peasantry improves quality and consistency of the product.

### 1.7 RESEARCH METHODOLOGY

The research has employed both primary and secondary data. To get the data, a sampling of the 150 population was performed. And structured questionnaire has been created to collect information for the study's conclusion and its research goals. The investigation was conducted in a minimum period. The study employed statistical tools, namely Weighted Average Ranking Analysis, and Chi-Square Analysis.

#### Source of data

Primary data collection was done through a questionnaire. A structured questionnaire was designed for conducting the survey from the farmers who involved in latest technology in supply chain development. Secondary data was

collected with the help of manual of instructions on latest technology, articles, research papers and internet

#### Sample size:

Totally 150 respondents made up the sample size for the study, and a structured questionnaire.

#### Tools for analysis

- Weighted Average Ranking Analysis
- Chi-square Test

### 1.8 ANALYSIS AND INTERPRETATION

#### 1.8.1 WEIGHTED AVERAGE RANKING ANALYSIS

A weighted average is a type of mean that gives differing importance to the values in a dataset. In contrast, the regular average, or arithmetic mean, gives equal weight to all observations. The weighted average is also known as the weighted mean, and I'll use those terms interchangeably. Use a weighted mean when you must consider the relative significance of values in a dataset. In other words, you're placing different weights on the values in the calculations.

#### FORMULA:

$$\text{Weighted Average} = \frac{\sum Wx}{\sum W}$$

THE TABLE SHOWING THE SATISFACTION LEVEL OF FARMERS IN SUPPLYCHAIN DEVELOPMENT

S.NO	FACTORS	AWARENESS LEVEL					TOTAL	WEIGHTED TOTAL	RANK
		HS	S	N	DS	HDS			
1.	Selling the product	28 (5) 140	93 (4) 372	20 (3) 60	3 (2) 6	6 (1) 6	584/150	3.89	I
2.	Transportation	23 (5) 115	51 (4) 204	67 (3) 201	5 (2) 10	4 (1) 4	534/150	3.56	V
3.	Price fixation	18 (5) 90	56 (4) 224	60 (3) 180	11 (2) 22	5 (1) 5	521/150	3.47	VI
4.	Aware of government policies	7 (5) 35	46 (4) 184	61 (3) 183	33 (2) 66	3 (1) 3	471/150	3.14	IX
5.	Aware of market trends	21 (5) 105	64 (4) 256	43 (3) 129	7 (2) 14	15 (1) 15	519/150	3.46	VII
6.	Reliability	11 (5) 55	59 (4) 236	52 (3) 156	22 (2) 44	6 (1) 6	497/150	3.31	VIII
7.	Communication to	29	69	40	8	4	561/150	3.74	III



	Suppliers	(5) 145	(4) 276	(3) 120	(2) 16	(1) 4			
8.	Support services	29 (5) 145	76 (4) 304	24 (3) 72	13 (2) 26	8 (1) 8	555/150	3.07	IV
9.	Quality of inputs	58 (5) 289	50 (4) 200	19 (3) 57	14 (2) 28	9 (1) 9	583/150	3.88	II

Source: Primary Data.

**INTERPRETATION:**

The above table indicates the Selling the product Ranked I. Quality of inputs Ranked II. Communication to suppliers Ranked III. Support services IV. Transportation Ranked V. Price fixation Ranked VI. Aware of market trends Ranked VII. Reliability Ranked VIII. Aware of government policies Ranked IX.

**1.8.2 CHI-SQUARE TEST**

Chi-Square Test A chi-square test is a statistical test used to compare observed results with expected results. The purpose of this test is to determine if a difference between observed data and expected data is due to chance, or if it is due to a relationship between the variables you are studying.

**FORMULA:**

$$\chi^2 = \sum (O_i - E_i)^2 / E_i$$

Where  $O_i$  is the observed value and  $E_i$  is the expected value.

**THE TABLE SHOWING CHI-SQUARE TEST FOR GENDER AND ACCESS TO MODERN TECHNOLOGY OF THE RESPONDENTS**

FACTORS	CALCULATED VALUE	TABLE VALUE	DF	REMARKS
GENDER	.600	7.815	3	Significant at 5% level

**INTERPRETATION:**

It is disclosed from the above analysis that the calculated value(0.600) is less than the table value (7.815). Hence null hypothesis is accepted.

**1.9 FINDINGS**

**1.9.1 Weighted average ranking analysis**

The table indicates the Selling the product Ranked I. Quality of inputs Ranked II. Communication to suppliers Ranked III. Support services IV. Transportation Ranked V. Price fixation Ranked VI. Aware of market trends Ranked VII. Reliability Ranked VIII. Aware of government policies Ranked IX.

**1.9.2 Chi-square test**

There is no significant relationship between the Gender and Access to modern technology of the respondents because the calculated value (0.600) is lesser than the table value (7.815). Hence null hypothesis is accepted.

**1.10 SUGGESTIONS**

- Farmers to understand their knowledge and perception of fair pricing and SCM practices.

This qualitative data can provide valuable insights into their experiences and needs.

- Analyze market trends and pricing mechanisms for sustainable agricultural products. Compare prices received by farmers with market prices to identify discrepancies and opportunities for improvement.
- The farmers should improve their modern technologies for advanced agriculture processing and to get fair prices.
- To improve Block chain or mobile applications, in improving transparency and efficiency in agricultural supply chains. Assess farmers' readiness to adopt these technologies and their potential benefits.

**II. CONCLUSION**

The study on fair prices for sustainable agriculture products and farmers' awareness of supply chain management (SCM) reveals a critical need for greater transparency, education, and collaboration within the agricultural sector. By ensuring fair prices, we can incentivize sustainable practices while empowering farmers economically.



Additionally, enhancing farmers' understanding of SCM can optimize efficiency and reduce waste, ultimately fostering a more equitable and environmentally conscious agricultural system. Moving forward, policymakers, industry stakeholders, and consumers must work together to implement policies and practices that prioritize fairness, sustainability, and awareness throughout the agricultural supply chain.

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