

## Retail Traders' Pricing Strategies in Traditional Rice Markets During Covid – 19 Pandemic

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**Abstract:** The agricultural supply system has totally affected because of Covid-19 crisis especially in traditional rice markets. During pandemic period, the traditional rice varieties satisfy the consumption need of health consciousness, improvement of immunity and sustainable consumption behavior causes increase in the price. This study focuses on the pricing strategies adopted by the retail traders during covid-19 pandemic period in Madurai includes importance of adjustment of cost, unpaired relationship of demand and supply, decent pricing practices and existence oriented ownership. The study also investigate how the retail traders of traditional rice varieties respond to the instability nature of market while seeking balance between his profitability and consumer affordability from the data collected from retail traders selling traditional rice varieties in Madurai. The result depicts fair considerations, customer-based pricing and ethical-based pricing were important to sustain in traditional rice markets during this covid-19 crisis.

**Keywords:** Traditional rice varieties, Retail traders, Covid-19, Pricing Strategies

### Introduction

Traditional rice varieties represent the culinary identity of a region, rooted in cultural, spiritual, and environmental sustainability. These foods, often passed down through generations, include Karuppukavuni (Forbidden) rice, Mappilaisamba rice, Moongil rice, Seeraga samba rice, Kattuyanam rice etc., have their own ethnic specialties. These rice varieties best known for their health benefits, cultural trust and also act as immunity boosters too are abundantly marketed through local and traditional retail channels. The Covid-19 attack and continuous lockdowns affected the production, transportation and product access, positioned a huge pressure on the retail traders dealing with the traditional rice varieties.

Traditional rice varieties retail traders confronted with unexpected challenges like supply chain scarcity, huge purchase cost, limited consumer mobility and unpredictable demand. So pricing strategies given a trustful hand to the traders to overcome risk, continue their business and to get consumer confidence over them. This study investigate hoe retail traders in traditional rice varieties modified their pricing strategies during covid-19 pandemic and ethical proportions occupied in pricing crucial food merchandise.

### Literature Review:

**Dansero, E. and Puttilli, M. (2013)<sup>1</sup>.** Traditional, time-consuming techniques such as fermentation, maturing, curing, and slow cooking help traditional food items retain their distinct features, identifiable quality, and

<sup>1</sup> Dansero, E.; Puttilli, M. (2013), "Multiple territorialities of alternative food networks: Six cases from Piedmont", Italy. Local Environ. Int. J. Justice Sustain. 2013, 19, pp.626–643.

sensory experience. In addition, the intake of traditional food products supports a favorable impact on local companies, economies, and environmental sustainability.

**ZeltzinRocillo-Aquino et al. (2021)<sup>2</sup>** discovered that the concept of traditional food is very dynamic, complicated, and varied, as it is conceptualized differently depending on the location and the individual who performs it. A general description of traditional food can be derived from the dimensions that comprise it; nevertheless, the details in terms of time, place, and acceptable activities must be determined by the community that produces them.

**Peulic, T., et. al. (2023)<sup>3</sup>**, in their investigation, they discovered that the majority of respondents were females (69.1%), which is consistent with the findings of prior surveys. The majority of respondents in the sample resided in the city (85%), was between the ages of 25 and 45, was employed (70.4%), and belonged to families with three or more members (65.6%). The findings revealed that 98.3% of respondents consume traditional food products in their homes, with 89.1% doing so at least once a week. These findings are consistent with the literature, demonstrating an increasing consumer desire in distinctive, natural, high-quality food products produced using traditional methods and with fewer additives and preservatives. Furthermore, 95.2% of respondents made purchasing decisions based on product quality, demonstrating customer interest in healthful, sustainable, and nutritionally valuable food.

#### **Objectives of the study:**

1. To scrutinize the different pricing strategies followed by the retail traders for traditional rice varieties during Covid-19 pandemic period
2. To classify different pricing strategies adopted by the retail traders in traditional rice markets during Covid-19.
3. To analyze changes in prices of traditional rice varieties before and during the pandemic period.
4. To study the level of demand for traditional rice varieties under different pricing strategies.
5. To evaluate the relationship between different pricing strategies and the level of demand for traditional rice varieties.

#### **Research Methodology:**

##### **Sources of data**

The study is based on both primary and secondary data.

##### **Primary data**

Primary data were collected from retail traders selling traditional rice varieties in Madurai, through structured questionnaires and interviews.

##### **Secondary data**

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<sup>2</sup> ZeltzinRocillo-Aquino, Fernando Cervantes-Escoto, Juan Antonio Leos-Rodríguez, Daniela Cruz-Delgado & Angélica Espinoza-Ortega (2021), "What is a traditional food? Conceptual evolution from four dimensions", Journal of Ethnic Foods, Vol.8, Article number: 38, pp.8-38.

<sup>3</sup> Peulic, T., Maric, A.; Maravic, N.; Novakovic, A.; KalenjukPivarski, B.; Cabarkapa, I.; Lazarevic, J.; Šmugovic, S.; Ikonc, P. (2023), "Consumer Attitudes and Preferences towards Traditional Food Products in Vojvodina", Sustainability, Vol.15, p.12420.

Secondary data rooted from Government reports, agricultural publications and online sources.

### Sampling method and Size

An intentional sampling method was followed to choose retail traders those involved in selling traditional rice varieties in Madurai. A sum of 120 retail traders was chosen as the sample for the study.

Study area focused on traditional rice markets in Madurai and data analysed using percentage analysis, mean, median, standard deviation, t-Test and chi-square test.

The data were analysed using jamovi statistical software. A paired sample t-test was used to study price difference before and during the Covid-19 pandemic period.

### Hypotheses of the study:

#### Hypothesis 1 : Before Covid-19 and After Covid-19 Pricing

**Ho :** There is no significant rise in the price of traditional rice varieties during Covid-19 pandemic period compared with the price of traditional rice varieties before Covid-19 pandemic period in traditional rice markets.

**H1 :** There is a significant rise in the price of traditional rice varieties during Covid-19 pandemic period compared with the price of traditional rice varieties before Covid-19 pandemic period in traditional rice markets.

#### Hypothesis 2 : Overall Demand and Pricing Strategies

**Ho :** There is no significant relationship between the Overall demand for traditional rice varieties and Pricing Strategies adopted by the retail traders in traditional rice markets during Covid-19 pandemic.

**H1 :** There is a significant relationship between the Overall demand for traditional rice varieties and Pricing Strategies adopted by the retail traders in traditional rice markets during Covid-19 pandemic.

### DATA ANALYSIS

**Table 1: Price Comparison of Traditional Rice Varieties before and During Covid-19**

| S.No | Name of the Traditional Rice Varieties | Before Covid-19 (Rs.) | Average Price (Rs.) | During Covid-19 (Rs.) | Average Price (Rs.) | Price Increase (Rs.) | Percentage change in prices |
|------|----------------------------------------|-----------------------|---------------------|-----------------------|---------------------|----------------------|-----------------------------|
| 1.   | Karupukavuni Rice                      | 80-100                | 90                  | 110-180               | 145                 | 55                   | 61%                         |
| 2.   | Mappilai Samba Rice                    | 180-220               | 200                 | 240-300               | 270                 | 70                   | 35%                         |
| 3.   | Moongil Rice                           | 90-120                | 105                 | 150-190               | 170                 | 65                   | 62%                         |
| 4.   | Seeraga samba Rice                     | 70-100                | 85                  | 110-150               | 130                 | 45                   | 53%                         |
| 5.   | Kattuyanum Rice                        | 75-95                 | 85                  | 90-120                | 105                 | 20                   | 24%                         |

**Source: Primary Data**

Average prices were calculated from collected retail price ranges, after which price differences were calculated for this average prices and percentage price changes was calculated using standard price change formula.

Percentage Change in Prices =  $\frac{\text{Price During Covid-19} - \text{Price Before Covid-19}}{\text{Price Before Covid-19}} * 100$

Price Before Covid-19

Chart 1: Price Comparison of Traditional Rice Varieties before and During Covid-19

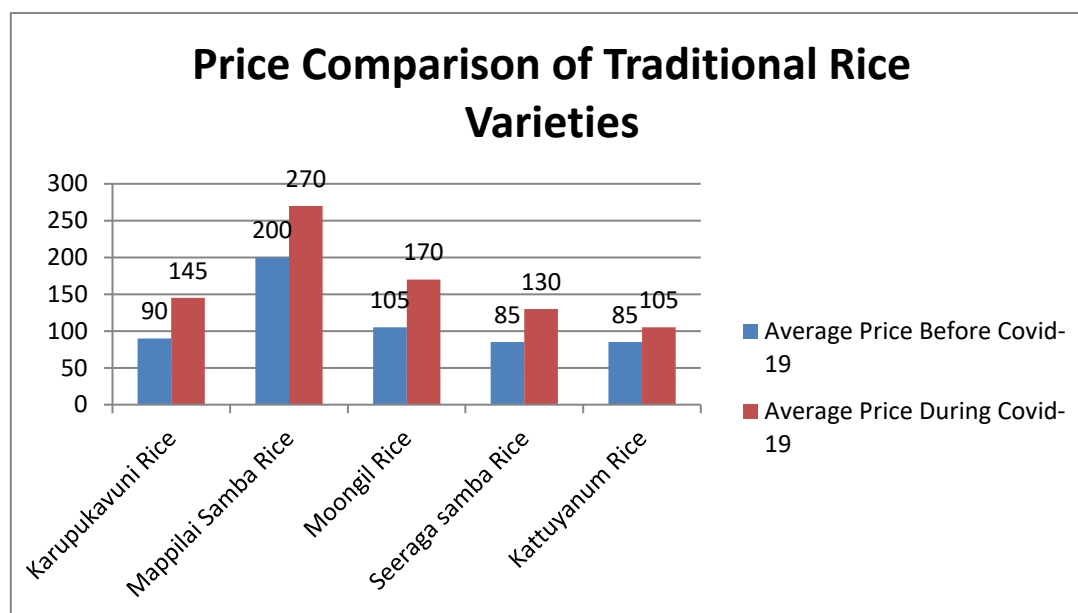
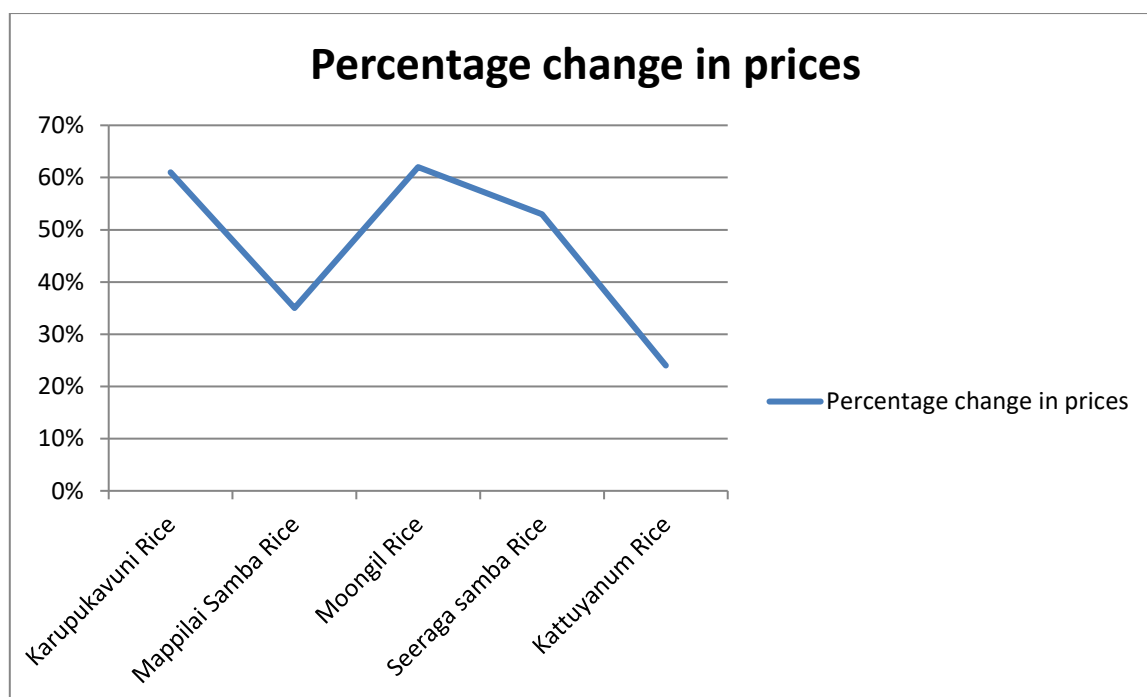


Chart 2: Percentage Changes in Prices



#### Interpretation:

Table 1 represents the changes in prices and percentage changes in prices of selected traditional rice varieties before and during Covid-19 pandemic period. The table 1 indicates, a comparatively higher level of price increase for the selected traditional rice varieties. Moongil rice recorded highest percentage increase (62%) in contrast Kattuyanum Rice shows, a comparatively lower percentage increase (24%).

## Testing the Hypothesis -1

### Hypothesis 1 : Before Covid-19 and After Covid-19 Pricing

**Ho :** There is no significant rise in the price of traditional rice varieties during Covid-19 pandemic period compared with the price of traditional rice varieties before Covid-19 pandemic period in traditional rice markets.

**H1 :** There is a significant rise in the price of traditional rice varieties during Covid-19 pandemic period compared with the price of traditional rice varieties before Covid-19 pandemic period in traditional rice markets.

### Tool used for testing the hypothesis - t-Test

**Table 2: Paired t-Test Results for Traditional Rice Varieties Prices**

| Variables          | Mean | Median | SD   | t    | df   | p     |
|--------------------|------|--------|------|------|------|-------|
| Price before covid | 113  | 90.0   | 49.3 | 5.76 | 4.00 | 0.005 |
| Price during covid | 164  | 145.0  | 63.8 |      |      |       |

Note.  $H_a \mu$  Measure 1 - Measure 2  $\neq 0$

### Interpretation:

The paired sample t-test exposed a statistically significant difference in the prices of traditional rice varieties before and after Covid-19 pandemic period ( $t = 5.76$ ,  $df = 4.00$ ,  $p = 0.005$ ). Hence null hypothesis was rejected. So there is a significant rise in the price of traditional rice varieties during Covid-19 pandemic period when compared with the price of traditional rice varieties before Covid-19 pandemic period in traditional rice markets.

## Testing the Hypothesis – 2

### Hypothesis 2 : Overall Demand and Pricing Strategies

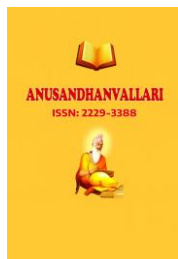
**Ho :** There is no significant relationship between the Level of overall demand for traditional rice varieties and Pricing Strategies adopted by the retail traders in traditional rice markets during Covid-19 pandemic.

**H1 :** There is a significant relationship between the Level of overall demand for traditional rice varieties and Pricing Strategies adopted by the retail traders in traditional rice markets during Covid-19 pandemic.

### Tool used for testing the hypothesis - $\chi^2$ test

**Table 3: Cross Tabulation between respondents' Overall demand for traditional rice varieties and Pricing strategies adopted by retail traders during Covid-19 pandemic.**

| Pricing Strategies of Retail Traders | Overall Demand for Traditional Rice Varieties |             |                 |            |                 | Total |
|--------------------------------------|-----------------------------------------------|-------------|-----------------|------------|-----------------|-------|
|                                      | Very High Demand                              | High Demand | Moderate Demand | Low Demand | Very Low Demand |       |
| Cost plus Pricing                    | 6                                             | 20          | 0               | 0          | 0               | 26    |
| Demand Based Pricing                 | 6                                             | 42          | 8               | 0          | 0               | 56    |
| Value Based Pricing                  | 6                                             | 6           | 10              | 0          | 0               | 22    |
| Differential Pricing                 | 4                                             | 0           | 0               | 1          | 1               | 4     |



|                     |    |    |    |   |   |     |
|---------------------|----|----|----|---|---|-----|
| Competitive Pricing | 4  | 4  | 2  | 0 | 2 | 12  |
| Total               | 26 | 72 | 22 | 1 | 3 | 120 |

Source: Primary data

$\chi^2$  Tests

|          | Value | df | p      |
|----------|-------|----|--------|
| $\chi^2$ | 82.5  | 16 | < .001 |
| N        | 120   |    |        |

$$\chi^2 = \sum (O-E)^2 / E = 82.5$$

$$\text{Degree of freedom} = (r-1)(c-1) = (5-1)(5-1) = 16$$

$$\text{Calculated Value} = 82.5$$

$$\text{Table Value} = 26.3$$

The Table value of  $\chi^2$  for 16 degree of freedom at 1 percent level of significance is 26.3. The calculated value of  $\chi^2$  is ( $\chi^2 = 82.5$ ,  $df = 16$ ,  $p = 0.001$ ) more than the table value and hence the result rejects the null hypothesis. So there is a significant relationship between the overall demand for traditional rice varieties and Pricing Strategies adopted by the retail traders in traditional rice markets during Covid-19 pandemic.

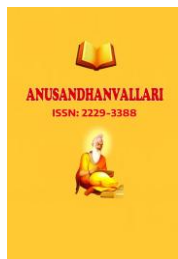
## SUGGESTIONS

1. Retailers of Traditional Rice must take up transparent and fair pricing during Covid-19 pandemic period.
2. Supply chain coordination by Traditional Rice Traders may decrease shortages and transportation delays.
3. In semi-urban and price-sensitive markets, traditional rice may be perceived as expensive. Traditional Rice Retailers therefore invest in consumer education and promotional efforts to justify higher price points.
4. During uncertain market conditions (Covid-19 pandemic period) collaboration between farmers, wholesalers and retailers will stabilize Traditional Rice Prices.

## CONCLUSION

The study on Retail Traders' Pricing Strategies in Traditional Rice Markets during Covid – 19 Pandemic highlights the important changes that occurred in pricing the Traditional Rice Varieties due to Market uncertainty, supply chain instability and higher procurement and operational cost. This Covid-19 pandemic created drastic changes in availability and prices of Traditional Rice Varieties and also constrained the retailers to follow pricing strategies in order to continue their business.

The findings indicate that different pricing strategies adopted by the retailers and its effect on the overall demand of Traditional Rice Varieties during Covid-19 pandemic. The study concludes that effective pricing strategies and improved supply chain management might be the most important helping hands for the



Traditional Rice Retailers in such crisis situations. Moreover the study emphasizes digitalization and policy framing to support and strengthen the resilience of Traditional Rice Varieties in such potential emergencies.

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