# Marketing Efficiency of Coconut Value Chain in East Godavari District of Andhra Pradesh

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**ABSTRACT** The study is examined the nature of the marketing channels, marketing costs, margins, price spread and producer's share in the consumers' price of coconut. The study is examined four mandals namely Amalapuram, Ambajepeta, Rajol and Kotapeta of East Godavri Distract of Andhra Pradesh. The study is based on Primary data, Simple Random Sampling Method was adopted for study. The primary data was collected from 400 coconut growers, 20 Pre-harvest contractors, 20 wholesalers, 20 Retailers. In this study shown that about 55 percent of the respondents sold coconuts in the non-husked form. The most common marketing channel identified was the 'Coconut growers- pre-harvest contractor—Commission agents—wholesaler—retailer-consumer'. In this study indicate that the majority of coconut growers (36.25 per cent) prefer the sale to pre-harvest contractors. The marketing Efficiency Index of Channel III is great than of channel I & channel II. Marginal Efficiency of Channel III is greater than channel I.

## Introduction

The coconut Palms (Cocos nucigfera Linn.) is supposed to be one of the five legendary Devavrikshas and is known as Kalpavrikshas-the all giving tree-in Indian classics. All part of the coconut palm are used in some way or another in the daily life of the people of the coconut growing countries in the world. Coconut is grown in more than 86 countries worldwide, India ranks third on world coconut map and in recent times became the largest producer of coconut with the production of 16.9 billion nuts from average under plantation of about 1.89 million hectares. In India, coconut is cultivated mainly in the costal track of Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, Orissa, West Bengal, Pondicherry, and Maharashtra and in the islands of Lakshadweep, Andaman and Nicobar. Of late, coconut cultivation has been introduced to suitable location in non-traditional states including Assam, Gujarat, Madhya Pradesh, Rajasthan, Bihar, Tripura, Manipur, and Arunachal Pradesh and in the hinterland regions of the coconut growing states The coconut industry is one of the country's major pillars in employment generation and foreign exchange earnings. However, local production problems, the expansion in coconut hectare of neighboring countries, and recent developments in biotechnology research on other competing crops that have high lauric oil content might affect bits long term sustainability and viability. In this article mainly focused on marketing cost, margin, price spread and efficiency of different channels in four mandals viz., Amalapuram, Ambajepeta, Rajol and Kothapeta in East Godavari District of Andhra Pradesh.

## Objectives:

To examine the role of different marketing intermediaries along the marketing channels of coconut.

To determine the marketing cost, marketing margin, Price spread and the producers share in consumer's rupees.

To determine marketing efficiency i.e., the efficient channel in marketing of coconut.

## Methodology

The present study was conducted in East Godavari District of Andhra Pradesh and the population of active coconut cultivation in the district was surveyed. The Random Sampling Method adopted for collecting data, four mandals viz., Amalapuram, Ambajepeta, Razol and Kothapeta were identified for selection of coconut marketing, Simple Random Sampling Method was adopted for study. The primary data was collected from 400 coconut growers, 20 Pre-harvest contractors, 20 wholesalers, 20 Retailers. Three markeing efficiency index applied i.e., Shepherd's method, Acharya Agarwal's method and composite Index method.

Primary data have been collected mostly by direct contact method. The Questionnaires and schedules have been used for whole study. Primary data have been collected from the selected 4 Mandals with pre-structured questionnaires on a number of major aspects of marketing of coconut marketing, marketing channels marketing cost, marketing margin, efficiency of marketing and problems of marketing. Field survey is conducted during the year 2014-2015.

**Marketing Cost :** $TC = P_c + \sum MC_{ith}$

Where ,

TC= Total marketing cost

$P_c$- Marketing cost of Producers

$MC_{ith}$- Marketing cost of ith intermediaries

Marketing margin: $MM = Sp - (Pp + Mc)$

Where,

MM - Marketing margin

$S_p$ - Selling Price

$P_p$ - purchase price

$M_c$ - Marketing cost

**Producers share:  PS  = $P_r/C_p$ x  100**
Where,

PS = Producer share

Pr = Price received by Producer

Cp  = Consumer price

**Price Spread:  PS= PC-PR**
Where,

PS= Price Spread

PC = Price paid by final consumer

PR = Price received by ultimate producer.

**Market Efficiency : ME=  V/I  -1**
ME =      Market Efficiency

V = Value of goods sold or Consumer Price

I = Total Marketing Cost

**Result and Discussion:**
**Marketing Channels:**
The market channel for coconut is the flow of product from the coconut growers through the various marketing intermediaries to the consumers. consists of intermediaries namely pre-harvest contractors,  commission agents, wholesalers and retailers.   The choice of intermediaries depends upon the accessibility of the other intermediaries, economic condition of the farmers, marketing chain and other factors in the marketing process.   In this study area three marketing channels were identified:

**Channels – I:**  Growers Pre - harvest  contractors  commission Agents wholesalers      Retailers        consumers

**Channels - II**    Growers commission Agents wholesalers Retailers  Consumer.

**Channels -  III** Growers        wholesalers        Retailers consumers.

**Marketing Cost :**
Marketing cost is the cost incurred in cutting, de-husking, transporting and other charges paid in marketing the coconuts.  It is the actual expenses incurred in bringing the goods and services from  the producer to the consumer. The marketing cost is a vital factor in  determining the profitability of the coconut growers and middlemen.

**Table:  1 Marketing cost incurred by Pre - Harvest Contractors**
**Rs. (1000 nuts)**

| Sl. No. | Cost component | Amount | Percentage |
|---|---|---|---|
| 1. | Cutting | 54.05 | 8.32 |
| 2. | Loading & unloading | 59.05 | 9.08 |
| 3. | Commission | 129 | 19.85 |
| 4. | Counting | 13 | 2.00 |
| 5. | Transporting | 213.65 | 32.89 |
| 6. | Interest on working capital | 181 | 27.86 |
| | Total | 649.75 | 100 |

Source: Primary Data.

The table 1 shows that the pre-harvest contractors   incurred by  marketing cost of  Rs. 650  per 1000 nuts. The transport cost  is highest  compared to all the other costs. In the same way marketing cost, excluding     interest on working capital, is less for the pre-harvest contractors when compared with that of the growers. This was mainly because of concessions enjoyed by the pre-harvest contractors due to their frequent  and large scale transactions with the Growers.

**Table:  2 Marketing Cost incurred by Wholesalers (Rs/ 1000 nuts)**

| Sl. No. | Cost component | Amount | Percentage |
|---|---|---|---|
| 1. | Loading | 109 | 26.68 |
| 2. | Commission | 124 | 30.37 |
| 3. | Wages and salaries | 35 | 8.56 |
| 4. | Go down | 21.35 | 5.24 |
| 5. | Packing and counting | 12.10 | 2.96 |
| 6. | Wastage | 13 | 3.18 |
| 7. | Interest on working capital | 94 | 23.01 |
| | Total | 408.45 | 100 |

Source: Primary Data.

From Table 2,  it is observed that the wholesalers incurred a  marketing cost of Rs. 408.45   for 1000 nuts, with 30.37 per cent of the total cost, commission charges  was highest  of marketing cost.  Before marketing sales of the coconut, the wholesalers have to give commission charges for each coconut. These may be the reasons for high commission charges.   Loading, wages and salaries go down, and office rent and office, packing, counting, wastage and interest on working capital are borne by them.

**Table:  3 Marketing cost incurred by Retailers**

| Sl. No. | Cost component | Amount | Percentage |
|---|---|---|---|
| 1. | Market fee | 27 | 17.42 |
| 2. | Shop rent | 63 | 40.65 |
| 3. | Transport cost | 42 | 27.09 |
| 4. | Go down and office rent | 15 | 9.67 |
| 5. | Wastage | 8 | 5.17 |
| | Total | 155 | 100 |

Source: Primary Data.

The table 3 shows that the Retailers purchase coconut from the wholesalers and not directly from the commission agents or the pre-harvest contractors. More than 40.65 per cent of the marketing cost of the retailers is due to their shop rent.  Retailers have to buy only de-husked coconut and they need to sell it a  once as the produce is perishable. Total marketing cost 1000 nuts of  retailers worked out at Rs. 155.

### Table: 4 Choice of Middlemen by Coconut Growers

| Sl. No. | Middleman | Number of Growers | Percentage |
|---|---|---|---|
| 1. | Pre- harvest contractor | 145 | 36.25 |
| 2. | Wholesaler | 125 | 31.25 |
| 3. | Commission agent | 130 | 32.5 |
| | Total | 400 | 100 |

Marketing of coconut is done through different intermediaries given in table 4. 32.5 per cent of the coconut growers sell their coconuts directly to commission agents. 36.25 per cent of sample growers prefer the sale to pre-harvest contractors, who make advance payment a few months before the harvest on condition that the entire produce should be sold to them at the price prevailing at the time of harvest. 31.25 per cent of the coconut growers sell their produce directly to the wholesalers who are prepared to buy coconut at the garden of the growers when there is a great demand for coconut.

**Price Spread:**

The difference between the price paid by the consumer and the price received by the coconut grower for the same quantity of coconuts produce is called price spread. The price spread has been calculated for every coconut sold by coconut growers. The gross and net price received along with the marketing cost incurred by each intermediary under different channels have been computed and given in table .

### Table: 5 Price Spread of Coconut (for 1000 nuts)

| Sl.No. | Particulars | Channel-I Amount | Channel-I % | Channel-II Amount | Channel-II % | Channel-III Amount | Channel-III % |
|---|---|---|---|---|---|---|---|
| 1 | PROCEDURE | | | | | | |
| | Net Price Received | 2400 | 51.56 | 2810.24 | 60.38 | 2825 | 60.69 |
| | Marketing cost | - | - | 590.12 | 12.67 | 565 | 12.13 |
| | Gross price received or paid by Pre-harvest contractor, wholesaler, retailer | 2400 | 51.56 | 3400.36 | 73.06 | 3390.00 | 72.83 |
| 2 | Pre- harvest Contractor Price paid | 2400 | 51.56 | - | - | - | - |
| | Marketing cost | 649.75 | 13.96 | | | | |
| | Marketing margin price received | 340.25 | 7.31 | | | | |
| 3 | **Wholesaler** Price- paid | 3390 | 72.83 | 3390 | 72.83 | 3390 | 72.83 |
| | Marketing cost | 408.45 | 08.77 | 408.45 | 08.77 | 340.45 | 07.31 |
| | Marketing Margin Price received | 190.65 | 04.09 | 190.65 | 04.09 | 258.65 | 05.55 |
| | | 3989.1 | 85.71 | 3989.1 | 85.71 | 3989.1 | 85.71 |
| 4 | **Retailer** Price- paid | 3989.1 | 85.71 | 3989.1 | 85.71 | 3989.1 | 85.71 |
| | Marketing cost | 155 | 03.33 | 155 | 03.33 | 155 | 03.33 |
| | Margin | 510 | 10.95 | 510 | 10.95 | 510 | 10.95 |
| | Priced Received by Paid by consumer | **4654.1** | **100.00** | **4654.1** | **100.00** | **4654.1** | **100.00** |

Source: Primary Data.

Table 5 indicate the Price Spread is worked out for 1000 nuts sold in the market. Share of the coconut grower in the price paid by the consumer is 51.56 per cent, 60.38 per cent, 60.69 per cent in Channels I, II, and III respectively. It is found to be the highest in channel III when compared to channels I and II. It is clear the above table that the producer's share is the minimum in channel I due to the producer incurs no marketing cost. The marketing cost of coconut incurred by the producers was less in channel III (12. 13per cent) then channel II (12.67). The cost incurred by the wholesaler was the same in both channel I and channel II with 8.77 per cent of consumer price and it was lower in channel III with 7.31 per cent. As far as the retailers are concerned the marketing cost was uniform with 3.33 per cent in all the three channels. The margin received by the retailers is the maximum with 10.95 per cent of consumer price among all the intermediaries and also in all the channels of distribution followed by the pre harvest contractor with 7.31 per cent in channel I and the wholesalers with 7.31 per cent in channel III.

### Table: 6 Price Spread under Different Marketing Channels ( for 1000 nuts)

| Sl. No. | Particulars | Channel I | Channel II | Channel III |
|---|---|---|---|---|
| 1. | Marketing cost | 1213.2 | 1153.57 | 1060.45 |
| 2. | Marketing margin | 1040.5 | 700.65 | 768.65 |
| 3. | Producer's price | 2400.00 | 2810.24 | 2825 |
| 4. | Consumer's price | 4654.1 | 4654.1 | 4654.1 |
| 5. | Price spread | 2254.1 | 1843.86 | 1829.1 |

Source: Primary Data.

Table 6 shows that the total marketing cost incurred by the various market intermediaries was the highest in marketing channel I where the producers realized the least price for their products under this channel. The price spread was the lowest in channel III where the marketing

cost was minimum. Under channel III the producers realized the maximum price for their products. Marketing margin was minimum in channel II though the producer's price was also less which was due to some extent higher marketing cost under this channel.

**Table: 7 Marketing Margin of Middlemen's under Different Channels**

| Sl. No. | Particulars | Marketing Channels | | |
|---|---|---|---|---|
| | | I | II | III |
| 1. | Pre- harvest | 649.75 | - | - |
| 2. | Wholesaler | 408.45 | 408.45 | 340.45 |
| 3. | Retailer | 510.00 | 510.00 | 510.00 |
| | Total | 1568.2 | 918.45 | 850.45 |

**Source: Primary Data.**

It is observed from table 7 that in all the three channels of distribution, the retailers earned uniform margin Rs. 510 in all three marketing channels. The margin enjoyed by the pre-harvest contractors ranked first was Rs. 650 and that too only in channel I. As far as wholesalers are concerned, they get lower share in channel III compare to other channels. The wholesaler share is the lowest in all the three channels which compare to other intermediaries.

**Market Efficiency**
Marketing Efficiency helps to achieve Economic Efficiency if the total marketing cost. It other words the Lowest in cost the highest the Marginal Efficiency advice - versa. In the present study, marketing Efficiency was analyzed for the three different marketing Channels high. Shepherd's method, Acharya Agarwal's method and composite Index method.

**Table: 8**
**Marketing Efficiency under Shepherd's method**

| Sl.No. | Particulars | Channels | | |
|---|---|---|---|---|
| | | I | II | III |
| 1. | Consumers ( Rs. Per. nuts) | 4.65 | 4.65 | 4.65 |
| 2. | Marketing Cost (Rs. Per. Nuts) | 1.21 | 1.15 | 1.06 |
| 3. | Marketing Efficacy(Rs. Per. nuts) | 2.84 | 3.04 | 3.38 |

**Source: Primary Data.**

Table 8 shows that the Marginal Efficiency is in marketing Channel III is better this channel II & I due to the low marketing cost. The marketing efficiency in terms of rupees per nut is maximum with Rs. 3.38 followed by channel II with Rs. 3.04. The marketing efficiency of channel I is very poor because of its higher marketing cost which stood at Rs. 1.21 per nuts.

**Table: 9**
**Marketing Efficiency under Acharya and Agarwal's method**

| Sl. No. | Particulars | Channels | | |
|---|---|---|---|---|
| | | I | II | III |
| 1. | Total marketing cost | 1.21 | 1.15 | 1.06 |
| 2. | Value added | 2.25 | 1.84 | 1.82 |
| 3. | Marketing efficiency | 1.85 | 1.6 | 1.71 |
| 4. | Marketing efficiency index | 185 | 160 | 171 |

**Source: Primary Data.**
It is seen from table 9 that the marketing Efficiency Index of Channel I is great than that of channel II & chan-

nel III. The result showed that the coconuts had highest valued added in channel I and achieved highest marginal efficiency in that channel I .

**Table: 10 Marketing Efficiency under Composite Index Method for Coconuts**

| Marketing Channels | SCORES AS INDICATOR | | | | |
|---|---|---|---|---|---|
| | Producer's share in Consumer Price (per cent of consumer price) | Marketing Cost (per cent of consumer price) | Marketing Margin (per cent of consumer price) | Mean Score | Rank |
| I | 3 | 3 | 1 | 2.33 | III |
| II | 2 | 2 | 2 | 2.66 | II |
| III | 1 | 1 | 3 | 1.66 | I |

**Source: Primary Data.**

It is understood from Table 10 that out of the three channels, channel III is the most efficient as its mean score is the lowest with 1.66. The marketing margin in channel I is greater than in channel II but the marketing efficiency of channel I is less than that at channel II. The mean scores of the other two channels, I and II, are 2.33 and 2.66.

**Suggestions:**
The Central and State government and agencies like Coconut Development Board should improve their policy relating to coconut marketing in East Godavari district.

the State Government should come forward with some policies of tax exemptions for coconut. Government agencies i.e., Coconut Development Board, Horticulture department should provide market information through mass media.

**Conclusion**
Coconut palm is considered as the benevolent and benign tree, which provides food, drink and shelter to mankind. Coconut palm play a vital significance role in providing employment opportunities to the rural people. The present study has brought out the marketing cost, margin, price spread and efficiency of coconuts. Among the three marketing channels the marketing Efficiency Index of Channel III is great than of channel I & channel II. Marginal Efficiency of Channel III is greater than channel I. The result indicate that the coconut had highest valued added in channel III and achieved highest Marginal Efficiency in that Channel I. If the State and Central Government and Coconut Development Board are takes necessary steps to regulate coconut marketing process and gives, financial assistance for growth. if policy makers and other are to take necessary steps the development of coconut production in the study area and the suggestion made in the study properly implemented may result in promote progress and prospers of coconut growers, increase the production, productivity and increased revenue for the state.

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