**Marketing Efficiency of Cashew Nut in Chikkaballapur: An Economic Study**

 **ABSTRACT**
 The study investigated the marketing channels involved in the distribution of cashew nuts in the Chikkaballapur district, analyzing Primary data were collected from 50 stakeholders constituting 25 farmers and 25 intermediaries in various channels, including producers, village traders, processors, wholesalers, retailers, and consumers. Three distinct marketing channels were identified: Channel I (Producer → Village Trader → Processor → Retailer → Consumer), Channel II (Producer → APMC Trader → Processor → Wholesaler → Retailer → Consumer), and Channel III (Producer → Processor → Wholesaler → Retailer → Consumer).The analysis revealed significant differences in price spread, marketing costs, margins, and producer’s share across the channels. Channel III emerged as the most efficient, with the lowest price spread (₹9,275), highest producer’s share in the consumer’s rupee (58.35%), and highest marketing efficiency (1.40). Conversely, Channel II showed the highest price spread (₹11,042.65) and marketing costs (₹3,766.65), while Channel I had the lowest efficiency (1.14). The producer's selling price increased from ₹11,026.20 in Channel I to ₹12,995.65 in Channel III, while the consumer’s purchasing price ranged from ₹22,270.65 in Channel III to ₹23,875.70 in Channel II. The study highlights the importance of reducing intermediaries to improve efficiency and enhance the producer’s share.

**Key words** Cashewnut, Marketing Channel, Marketing Efficiency, Price spread,

1. **INTRODUCTION**
The cashew, (Anacardium occidentale L.), is a member of the Anacardiaceae family and is commonly referred to as a “gold mine of waste land.” The word “cashew” derived from the Brazilian word “acajaiba,” which the Portuguese translated as “Caju” and is also referred to as “kaju” in India. literally means “nut that produces itself”. It is indigenous to Brazil, from where it has spread across the globe. Portuguese explorers brought it to India in the sixteenth century for the purpose of afforestation and soil protection (Palei et.al.,2019). India is the largest producer, processer, consumer and exporter of cashew in the world (Elakkiya et al., 2017).

The current Cashewnut production in India accounts for 15 per cent of the global production. In 2022-23, India exported 59581.00 MT of raw cashew nut for an amount of Rs.2868.72 crore indicating high external demand for Indian raw cashew nut (Annon. 2023b). India exported cashew kernels to several countries, including European, Asian, Middle Eastern, North American and African countries. In the 2021-22, India imported 9.39 lakh metric tons of raw cashew nuts valued at Rs. 9,338.33 crore, indicating high internal demand for imported raw cashew nuts. Major sources of these imports included Ivory Coast, Tanzania, Guinea-Bissau, Benin, Ghana, Mozambique, Nigeria, and Senegal. Cashew cultivation in India has 11.95 lakh hectares with a production 7.82 lakh MT in 2022-23. Odisha has the largest area under cashew cultivation with 2.14 lakh hectares, followed by Andhra Pradesh with 1.96 lakh hectares and Maharashtra with 1.91 lakh hectares, Tamil Nadu with 1.67 lakh hectare and Karnataka stands fifth position in area having 1.39 lakh hectares (Annon.2022a).

Among the major cashew-growing districts in Karnataka, Udupi district ranked first in area under cashew cultivation in 2022-23, accounting for 41.85 per cent, followed by Dakshina Kannada with 30.09 per cent, Belgaum with 8.96 per cent, Uttar Kannada with 8.86 per cent, Shivamogga with 3.40 per cent, and Chikkaballapur in sixth position with a share of 3.22 per cent. In terms of production, Udupi district also ranked first, contributing 35.85 per cent of the state's total cashew production during 2022-23, followed by Dakshina Kannada with 24.37 per cent, Belgaum with 9.76 per cent, Uttar Kannada with 8.30 per cent, and Chikkaballapur in fifth position with a share of 3.64 per cent of the total production in Karnataka (Anon.2023c).

1. **METHODOLOGY**

Primary data were collected from various stakeholders constituting 25 farmers and 25 intermediaries in various channels. In order to analyses the marketing efficiency, price spread, and price difference among marketing channels, Chintamani taluk market of Chikkaballapur were selected based on convenience among 25 market intermediaries selected purposively five respondents from each market intermediaries are Wholesalers, APMC traders, Processers, Retailers, Village trader

**Price variation in different marketing channels** The marketing cost was calculated by estimating the cost incurred in the process of marketing of the two crops depending on their channels. Marketing margin Marketing margin was calculated as follows.(Kohls et al. 1985)

 **MMi = SPi – (PPi + MCi)**

Whereas:

MMi = Marketing margin of the i-th middleman,

SPi = Selling price of the i-th middleman,

 PPi = Purchasing price of the i-th middleman,

MCi = Marketing cost incurred by the i-th middleman

**Marketing efficiency**

There are three methods of calculating marketing efficiency. The degree of market performance was calculated using all the three methods as discussed below.

**Ratio of output to input (Conventional method)**

 **ME = O / I x 100**

 Whereas:

ME = Index of marketing efficiency,

O = Value added,

 I = Marketing cost

Value added = Difference between the price paid by the consumer to price received by the producers.

**Shepherd’s method**

Shepherd has suggested that the ratio of the total value of goods marketed to the marketing cost may be used as a measure of marketing efficiency. The higher the ratio, higher the marketing efficiency and vice versa (Shepherd 1965).

**ME = CP / MC**

 Whereas:

ME = Index of marketing efficiency,

CP = consumer’s purchase price and

MC= Total marketing cost.

**Acharya and Agrawal method method**

An efficient marketing channel ensures fair prices for all its members and helps maintainprice balance throughout the entire channel (Acharya 2019). Acharya's formula (Acharya 2014) was used for calculating the marketing efficiency of different channels of the papaya crop. It is expressed as:

 **MME= FP/ (MC +MM)**

Whereas:

 MME = Modified measure of index of marketing efficiency,

FP = Price received by farmer,

 MM = Marketing margin,

MC = Total marketing cost.

**Price spread**

 Price spread is the difference between the price paid by the consumer and the price received by the producer. It mainly consists of marketing costs and margins. The price spread analysis was carried out as follows (Acharya et.al. 2003)

$$Producer' s share in consumer' s rupee =\frac{Producer' s price}{Consumer' s price}×100$$

1. **RESULT AND DISCUSSION**

**Marketing channels**

 The marketing channel shows that how the commodity passes from producer to consumer through various means. There were three marketing channels observed for cashew in the study area; It was observed during survey that data was collected from 30 market intermediaries involved in the marketing of cashew, with each five individuals from producers, village traders, processors, wholesalers, retailers, and consumers were the important intermediaries. Further in the marketing of cashew following three different marketing channels were identified in the study area.

**Channel-I:** Producer → Village trader → Processor →Retailer→ Consumer

**Channel-II:** Producer → APMC Trader → Processor → Wholesaler → Retailer→ Consumer

**Channel-III:** Producer → Processor→ Wholesaler→ Retailer→ Consumer

The analysis of price spread and marketing efficiency across three marketing channels for a particular commodity reveals distinct patterns in producer prices, costs incurred, margins, and consumer prices, highlighting the varying degrees of efficiency and profitability for each channel.

In Channel I, the producer incurs a total cost of Rs. 200, comprising transportation, labour, and gunny bag charges, and receives Rs. 11,026.20 for the product, which includes marketing costs. The village trader purchases the product at this price, incurs Rs. 200 in additional costs, and adds a margin of Rs. 165.39, selling it to the processor at Rs. 11,391.59. The processor adds Rs. 2,300 in costs for processing, storage, packaging, transportation, and labour, while marking up their margin by Rs. 3,000, resulting in a sale price of Rs. 16,691.59. Wholesalers, bearing Rs. 550 in costs, add a margin of Rs. 1,250, leading to a sale price of Rs. 18,491.59. Finally, retailers incur Rs. 175 in costs and add a margin of Rs. 2,000, resulting in a final consumer price of Rs. 20,666.59. The price spread between the producer and consumer is Rs. 9,640.39, and the net producer’s share in the consumer's price is 53.35%. (Table 1)

In Channel II, the producer incurs Rs. 200 in total costs and receives a higher price of Rs. 12,833, reflecting better market conditions or higher demand. The product bypasses the village trader and is purchased directly by an APMC trader, who incurs Rs. 741.65 in GST and other costs. The trader adds a margin of Rs. 1,026, selling the product to the processor at Rs. 14,600.65. The processor then adds Rs. 2,300 in costs and a Rs. 3,000 margin, leading to a sale price of Rs. 19,900.65. Wholesalers and retailers continue the marketing process, adding Rs. 550 and Rs. 175 in costs, respectively, with each party marking up their margins by Rs. 1,250 and Rs. 2,000. The final consumer price in this channel is Rs. 23,875.65, with a price spread of Rs. 11,042.65, and the producer’s net share in the consumer’s price is 53.74%.

In Channel III, the producer receives the highest price of Rs. 12,995.65 while incurring Rs. 200 in total costs. The product goes directly from the producer to the processor without intermediary traders. The processor incurs Rs. 2,300 in costs for processing, storage, packaging, transportation, and labour and adds a Rs. 3,000 margin, resulting in a sale price of Rs. 18,295.65. Wholesalers and retailers further add their respective costs of Rs. 550 and Rs. 175, along with margins of Rs. 1,250 and Rs. 2,000, respectively. The final consumer price is Rs. 22,270.65, with the lowest price spread of Rs. 9,275. The producer’s share in the consumer's price in this channel is the highest, at 58.35%, indicating a more efficient marketing system with fewer intermediaries.

**Table 01: Price spread in different marketing channels**

*(Per quintal)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Particulars** | **Channel – I** | **Channel – II** | **Channel – III** |
| 1 | **Producers** |
| Cost incurred by producer |   |   |   |
| Transportation cost | 50.00 | 50.00 | 50.00 |
| Labour Charges | 100.00 | 100.00 | 100.00 |
| Gunny bag | 50.00 | 50.00 | 50.00 |
| **Total cost** | 200.00 | 200.00 | 200.00 |
| price received by farmer (Including marketing cost) | 11,026.20\* | 12,833.00\* | 12,995.65\* |
| 2 | **Village trader** |
| Purchase price | 11,026.20 | - | - |
| Cost incurred by trader |   | - | - |
| Storage cost | 50.00 | - | - |
| Transportation cost | 50.00 | - | - |
| Labour | 100.00 | - | - |
| **Total cost** | 200.00 | - | - |
| Margins | 165.39 | - | - |
| Sale price | 11391.59 | - | - |
| 3 | **APMC Trader** |
| Purchase price | - | 12833.00 | - |
| Cost incurred by APMC Charges  | - |   | - |
| GST (5%) |  | 641.65 | - |
| Storage | - | 25.00 | - |
| Transportation cost | - | 25.00 | - |
| Labour charges | - | 50.00 | - |
| Total cost | - | 741.65 | - |
| Margins | - | 1026.00 | - |
| Sale price | - | 14600.65 | - |
| 4 | **Processors** |
| Purchase price | 11391.59 | 14600.65 | 12995.65 |
| Cost incurred by processor |   |   |   |
| Processing cost | 2000.00 | 2000.00 | 2000.00 |
| Storage | 50.00 | 50.00 | 50.00 |
| Packaging | 50.00 | 50.00 | 50.00 |
| Transportation cost | 100.00 | 100.00 | 100.00 |
| Labour charges | 100.00 | 100.00 | 100.00 |
| Total cost | 2300.00 | 2300.00 | 2300.00 |
| Margins | 3000.00 | 3000.00 | 3000.00 |
| Sale price | 16691.59\*\* | 19900.65\*\* | 18295.65\*\* |
| 5 | **Wholesalers** |
| Purchase price | 16691.59 | 19900.65 | 18295.65 |
| Cost incurred by wholesaler |   |   |   |
| Storage | 50.00 | 50.00 | 50.00 |
| Transportation cost | 250.00 | 250.00 | 250.00 |
| Labour charges | 50.00 | 50.00 | 50.00 |
| Market fee | 100.00 | 100.00 | 100.00 |
| Miscellaneous charges | 100.00 | 100.00 | 100.00 |
| **Total cost** | 550.00 | 550.00 | 550.00 |
| Margins | 1250.00 | 1250.00 | 1250.00 |
| Sale price | 18491.59 | 21700.65 | 20095.65 |
| 6 | **Retailers** |
| Purchase price | 18491.59 | 21700.65 | 20095.65 |
| Costs incurred |   |   |   |
| Storage | 50.00 | 50.00 | 50.00 |
| Market fee | 125.00 | 125.00 | 125.00 |
| **Total cost** | 175.00 | 175.00 | 175.00 |
| Margins | 2000.00 | 2000.00 | 2000.00 |
| Sale price | 20666.59 | 23875.65 | 22,270.65 |
| **7** | **Consumer's** |
| Purchase price | 20666.59 | 23875.65 | 22,270.65 |
|  | **Price spread** | **9,640.39** | **11042.65** | **9275.00** |
|  | **Net Producer’s share in consumer’s price** | **53.35** | **53.74** | **58.35** |

**Note:** **\*** indicates price received by producer for 100 kg Cashew nuts and **\*\*** indicates sales price of 30 kg cashew kernels after processing because after processing 70 per cent are nut shells (70 kg) and 30 per cent cashew kernels (30 kg) which are further sold.

**Table 2: Marketing efficiency in different marketing channels**

*(Per quintal)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Particulars** | **Channel-I** | **Channel-II** | **Channel-III** |
| 1 | Total marketing cost | 3225 | 3766.65 | 3025 |
| 2 | Total marketing margin | 6415.39 | 7276 | 6250 |
| 3 | Producer selling price | 11,026.20 | 12,833.00 | 12,995.65 |
| 4 | Consumer Purchasing price | 20666.59 | 23875.7 | 22,270.65 |
| 5 | Price spread | 9,640.39 | 11042.65 | 9275.00 |
| 6 | Producer share in consumer rupee (%) | 53.35 | 53.74 | 58.35 |
| 7 | **Marketing efficiency** |
|  | Conventional method | 2.99 | 2.93 | 3.07 |
|  | Shepherd's method | 6.41 | 6.34 | 7.36 |
|  | Acharya's method | 1.14 | 1.16 | 1.40 |

**Fig. 1 Marketing efficiency**

**Fig. 2 Producer share in consumer Rupee (%)**



**Fig.3 Marketing Efficiency across channels**

The comparison of the three marketing channels reveals distinct differences in cost, margin, price spread, and efficiency. Channel I incur a total marketing cost of Rs. 3,225, while Channel II has the highest cost at Rs. 3,766.65, and Channel III has the lowest at Rs. 3,025. Similarly, the total marketing margin follows the same pattern, with Channel II having the highest margin (Rs. 7,276), Channel I at Rs. 6,415.39, and Channel III the lowest at Rs. 6,250. The producer's selling price increases progressively from Channel I (Rs. 11,026.20) to Channel III (Rs. 12,995.65), while the consumer purchasing price follows a similar trend, with Channel II being the highest (Rs. 23,875.70) and Channel III the lowest (Rs. 22,270.65). The price spread is largest in Channel II (Rs. 11,042.65), while Channel III has the smallest spread (Rs. 9,275.00), indicating a more efficient distribution system. Producer share in the consumer’s rupee is highest in Channel III (58.35%), followed by Channel II (53.74%) and Channel I (53.35%). In terms of marketing efficiency, Channel III demonstrates the highest efficiency at 1.40, followed by Channel II at 1.16, and Channel I at 1.14, suggesting that Channel III offers the most cost-effective and equitable distribution of benefits to the producer.

This result of the study was supported by the study of Chande Janhavi Anant (2019). The research was on economics of production and marketing of cashew in Ratnagiri district of Maharashtra and found the same marketing channels in study area.

Marketing efficiency across the three different methods, Channel-I shows a moderate efficiency with the Conventional Method at 2.99, while Shepherd’s Method significantly improves it to 6.41, reflecting higher value addition. However, Acharya’s Method yields a lower efficiency of 1.14. Channel-II follows a similar trend, with the Conventional Method at 2.93, and Shepherd’s Method increasing efficiency to 6.34. Acharya’s Method remains the lowest at 1.16. In Channel-III, the Conventional Method reaches the highest efficiency (3.07) compared to the other channels, but Shepherd’s Method again outperforms all, with the highest efficiency of 7.36, indicating better value generation. Acharya’s Method in this channel shows an efficiency of 1.40, still lower than Shepherd's, highlighting that while it may offer fairness in pricing, it does not add as much value per cost unit as Shepherd’s Method. (Table 02)

These results were in line with the results of Kaviraj et al. (2023) who worked on A study of marketing of cashewnut in south Goa district of Goa, India. Author has found the market functionaries in selling of cashewnut were the village traders, cooperative societies, processors, wholesalers and retailers

**Conclusion:**

The study reveals significant variations in marketing efficiency across the three identified channels for cashew. Channel III, characterized by fewer intermediaries, demonstrated the highest marketing efficiency (1.40), lowest price spread (Rs. 9,275), and the largest share of the consumer price for the producer (58.35%), indicating a more cost-effective system. Channel I, while having a reasonable producer share (53.35%), had a higher price spread and lower efficiency. Channel II, although yielding a higher selling price for the producer (Rs. 12,833), showed the highest price spread and lowest efficiency. These findings suggest that we need to start with better infrastructure—things like modern processing units, proper storage facilities, and well-connected transport systems. This will help reduce losses and maintain quality. Farmers can get better prices if they sell directly through Farmer Producer Organizations (FPOs), cooperatives, or online platforms like e-NAM. Transparent pricing is also key, so mechanisms like the Minimum Support Price (MSP), real-time price updates, and futures trading can help stabilize their incomes. Adding value is another game-changer—processing raw cashews into kernels, flavored snacks, or other cashew-based products can significantly boost profits. Farmers and traders should also tap into bigger markets through contract farming, public-private partnerships, and exports. Digital tools like mobile apps, blockchain for tracking supply chains, and AI-driven demand forecasts can make the whole system more efficient. Lastly, policy changes—like simplifying APMC rules, cutting down middlemen, and providing financial support for processing and exports—can help the cashew industry grow and compete better in global markets.

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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