# ECONOMIC ANALYSIS OF KINNOW'S MARKETING CHANNELS: EFFICIENCY, PRICE SPREAD, AND CHALLENGES IN DISTRIBUTION IN HANUMANGARH, RAJASTHAN

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**ABSTRACT:** This research paper examines the distribution and marketing efficiency of Kinnow across three distinct channels in a structured market environment, based on a survey of 100 Kinnow growers. The study meticulously details the price spread and total marketing costs involved in each channel, analyzing the net margins obtained by intermediaries and the final prices paid by consumers. Through the application of conventional marketing efficiency calculations, the paper highlights the disparities in economic benefits among the channels. Moreover, it identifies critical challenges impacting Kinnow marketing, such as transportation costs, market losses, and fluctuations in prices. The findings offer a deep dive into the systemic inefficiencies affecting the profitability and sustainability of Kinnow marketing. The research contributes to the agricultural economics literature by providing actionable insights that could lead to improved marketing strategies, thereby enhancing the economic welfare of both producers and consumers in the agricultural sector.

**Key words**: Marketing. Challenges, price efficiency, market margin, distribution

Kinnow, a mandarin hybrid primarily grown in South Asia, particularly in India and Pakistan, has significant economic value and plays a vital role in the agrarian economies of these regions. An in-depth analysis of the marketing channels through which kinnow is sold can provide insights into the economic implications for the stakeholders involved, from farmers to consumers.

The marketing of kinnow involves various channels, each with distinct characteristics and economic impacts. These include direct sales by farmers to consumers, intermediary-driven channels through wholesalers and retailers, and organized retail chains. Direct sales are often more profitable for farmers as they bypass intermediaries, thus retaining a larger share of the final consumer price *(Dhillon et al., 2013)*. Cooperative societies also play a critical role in the marketing of kinnow by providing farmers with collective bargaining power, which is essential for better pricing and reduced risk against price fluctuations *(Singh, 2011)*. These cooperatives assist in achieving economies of scale in marketing and distribution, providing an essential service, especially for small and medium-sized producers *(Kaur and Singh, 2012)*.

The majority of kinnow farmers opt for sales through intermediaries, including wholesalers and commission agents. While this channel can potentially cover a wider market, including exports, it tends to diminish the profit margins for the producers due to the multiple layers of handling and margins taken at each step *(Verma, 2017)*. Studies suggest that while these channels are efficient in terms of reach and logistics, they often fail to provide fair returns to the farmers *(Joshi et al., 2015)*.

The analysis of these channels reveals that not all are created equal in terms of efficiency and profitability.

For instance, *Sharma and Kumar (2014)* found that direct marketing channels tend to deliver about 60% of the consumer rupee back to the farmer, compared to only about 30-40% in intermediary-driven channels. This disparity highlights the need for improved marketing strategies that could support farmers in gaining a more substantial share of the consumer spending.

Economic analyses often use the Marketing Efficiency Ratio to compare these channels, and studies indicate that improvements in infrastructure, such as better roads and more widespread use of cold storage facilities, could enhance the profitability of direct sales and cooperative channels *(Gupta and Kapoor, 2018)*. Further, policy interventions are required to support these infrastructural developments alongside educational programs that equip farmers with necessary marketing and financial management skills *(Singh and Gupta, 2016)*.

Advancements in technology, particularly the use of digital platforms for marketing and sales, offer promising prospects for the kinnow market. E-commerce platforms can enable farmers to reach consumers directly, thereby potentially increasing their profitability *(Malhotra and Singh, 2019)*.

While the traditional intermediary channels dominate the marketing of kinnow, there is a significant potential to increase farmer incomes through direct sales and cooperative marketing strategies. These channels not only ensure fairer prices for farmers but also contribute to the overall sustainability of the agricultural sector. Continued research and policy support are vital to optimize these channels, thereby enhancing the economic benefits for kinnow producers and contributing to rural development (Kumar and Deep, 2020).

## 2. RESEARCH METHODOLOGY

A multi-stage sampling procedure was adopted for the selection of samples:

**a. First stage** - Selection of District
**b. Second stage** - Selection of Block
**c. Third stage** - Selection of Villages
**d. Fourth stage** - Selection of Respondents
**e. Fifth stage** - Selection of Market & Marketing Functionaries

### SELECTION OF DISTRICT

Rajasthan has 50 districts and 10 divisions. For this study, the Hanumangarh district was selected purposively based on its high production of Kinnow.

### SELECTION OF BLOCK

There are 7 development blocks in Hanumangarh district. The Sangria block was selected purposively due to its maximum production of Kinnow.

### SELECTION OF VILLAGES

A complete list of villages was obtained from the Block Development Office. Villages were ranked based on Kinnow production area. Subsequently, 5% of these villages were randomly selected for the study.

### SELECTION OF RESPONDENTS

With the assistance of the Gram Pradhan, a list of all farmers was prepared. From this list, 10% of the respondents, specifically Kinnow growers, were selected based on their experience and productivity.

### SELECTION OF MARKETS AND MARKET FUNCTIONARIES

The list of market functionaries was prepared with the help of the district mandi office, and 10% of these functionaries were selected randomly.

### SOURCE OF INFORMATION

Primary and secondary sources of information were utilized. Primary data was collected through direct communication with respondents using structured questionnaires, interviews, and personal interactions.

### Method of Primary Data Collection:

Primary data was collected from consumers, merchants, and various agencies using a survey method. A structured questionnaire was prepared for this purpose.

### Method of Secondary Data Collection:

Secondary data was gathered from various journals, articles, research papers, and organizational websites that provided relevant information.
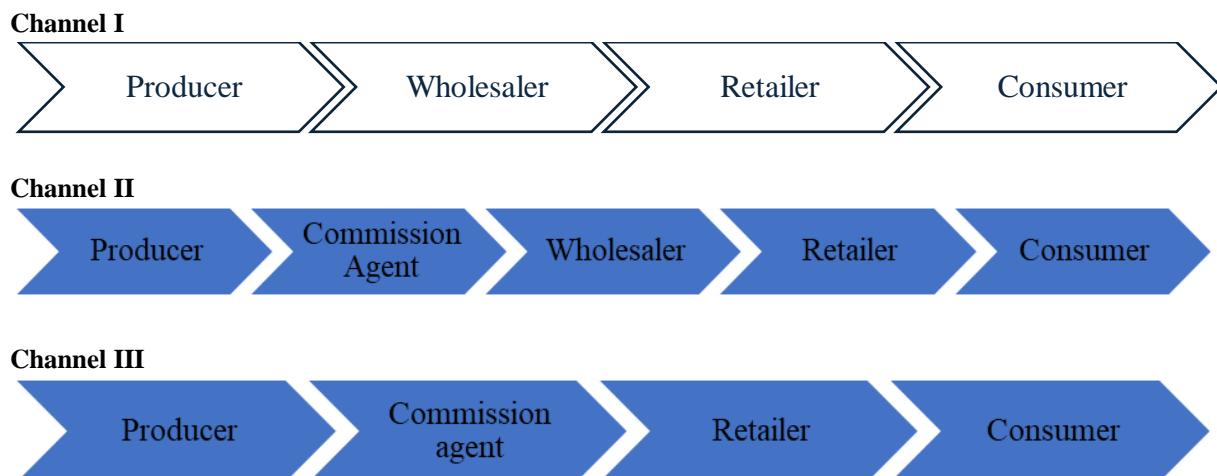
### RESULTS AND DISCUSSION



**Fig. 1 Identified Channels of Kinnow Grower (N=100)**

**Table 1: Price Spread of Kinnow in Channel I**

| S.No | Particulars | Price/Qlts |
|---|---|---|
| 1. | Net price received by producer | 1540 |
| 2. | **Cost incurred by the producer** | |
| a. | Packing cost | 10 |
| b. | Packing material cost | 11 |
| c. | Transportation cost | 17 |
| d. | Loading and unloading charges | 40 |
| e. | Miscellaneous charges | 50 |
| 3. | Total marketing cost | 128 |
| 4. | Sale price of producer/Purchase price of Wholesaler | 1668 |
| 5. | **Cost incurred by the wholesaler** | |
| a. | Loading, Unloading and repacking cost | 60 |
| b. | Grading charges | 53 |
| c. | Spoilage and losses | 41 |
| 6. | Total marketing cost | 154 |
| 7. | Sale price of wholesaler/ purchase price of retailers | 1822 |
| 8. | **Cost incurred by the retailers** | |
| a. | Loading and unloading Charges | 23 |
| b. | Carriage up to shop | 42 |
| c. | Miscellaneous charges | 20 |
| d. | Spoilage and losses | 43 |
| 9. | Total Marketing cost | 128 |
| 10. | Net margin of retailers | 927 |
| 11. | Sale price of retailer/ Purchase price of consumer | 2877 |

**Table 2: Price Spread of Kinnow in Channel II**

| S.No | Particulars | Price/Qlts |
|---|---|---|
| 1. | Net price received by producer | 1565 |
| 2. | **Cost incurred by the producer** | |
| a. | Packing cost | 10 |
| b. | Packing material cost | 11 |
| c. | Transportation cost | 17 |
| d. | Loading and unloading charges | 40 |
| e. | Miscellaneous charges | 50 |
| 3. | Total marketing cost | 128 |
| 4. | Sale price of producer/Purchase price of Commission agent | 1693 |
| 5. | **Cost incurred by the Commission agent** | |
| a. | Loading, Unloading and repacking cost | 45 |
| b. | Spoilage and losses | 32 |
| 6. | Total marketing cost | 77 |
| 7. | Sale price of Commission agent/ purchase price of wholesaler | 1770 |
| 8. | **Cost incurred by the wholesaler** | |
| a. | Loading and unloading and repacking charges | 63 |
| b. | Grading and sorting charges | 52 |
| c. | Spoilage and losses | 43 |
| 9. | Total Marketing cost | 158 |
| | Sale price of Wholesaler/Purchase price of retailer | 1928 |
| | Loading and unloading Charges | 27 |
| | Carriage up to shop | 35 |
| | Miscellaneous charges | 20 |
| | Spoilage and losses | 32 |
| 10. | Total Marketing cost | 114 |
| 11. | Net margin of retailer | 895 |
| 12. | Sale price of retailer/ Purchase price of consumer | 2937 |

**Table 3: Price Spread of Kinnow in Channel III**

| S.No | Particulars | Price/Qlts |
|---|---|---|
| 1. | Net price received by producer | 1540 |
| 2. | **Cost incurred by the producer** | |
| a. | Packing cost | 10 |
| b. | Packing material cost | 11 |
| c. | Transportation cost | 17 |
| d. | Loading and unloading charges | 40 |
| e. | Miscellaneous charges | 50 |
| 3. | Total marketing cost | 128 |
| 4. | Sale price of producer/Purchase price of Commission agent | 1668 |
| 5. | **Cost incurred by the Commission agent** | |
| a. | Loading, Unloading and repacking cost | 45 |
| b. | Spoilage and losses | 32 |
| 6. | Total marketing cost | 77 |
| 7. | Sale price of commission agent/ purchase price of retailer | 1745 |
| | Loading and unloading Charges | 27 |
| | Carriage up to shop | 35 |
| | Grading and sorting charges | 65 |
| | Miscellaneous charges | 20 |
| | Spoilage and losses | 56 |
| 8. | Total marketing cost | 203 |
| 9. | Net margin of retailer | 912 |
| 10. | Sale price of retailer/ purchase price of consumer | 2860 |

**Table 4: Marketing efficiency of Kinnow in different marketing channels**

| Particulars | Units | Channel I | Channel II | Channel III |
|---|---|---|---|---|
| Consumer purchase price | | 2877 | 2937 | 2860 |
| Total marketing price | | 410 | 400 | 408 |
| Total net margin of intermediaries | Per Quintal | 1337 | 1214 | 1320 |
| Net price received by farmers | | 1540 | 1565 | 1540 |
| Marketing efficiency by Conventional method | | 3.43 | 3.08 | 3.14 |

**Table 5: Issues restricting against marketing of Kinnow (N = 100)**

| S.No. | Issues | Garrett Score | Garrett Rank |
|---|---|---|---|
| 1 | Long distance from the production point to market | 72.14 | I |
| 2 | Heavy losses in the market | 70.52 | II |
| 3 | Too much fluctuation in prices | 69.45 | III |
| 4 | High cost of transportation | 69.14 | IV |
| 5 | Absence of minimum support prices | 68.57 | V |
| 6 | Lack of market information | 68.51 | VI |
| 7 | Inadequate of appropriate credit facilities | 67.21 | VII |
| 8 | Perishable nature of kinnow | 66.8 | VIII |
| 9 | Unorganized marketing system | 65.4 | IX |
| 10 | Existence of large number of intermediaries in marketing process | 65.12 | X |
| 11 | Lack of suitable packaging material | 64 | XI |
| 12 | Lack of infrastructure facility | 63.54 | XII |
| 13 | Commission agents not maintaining the proper records of sale and rate | 61.5 | XIII |

The findings from the research on Kinnow marketing channels reveal significant insights into the distribution and cost structures impacting the sale of Kinnow. Analyzing the data from 100 respondents, it's evident that there are distinct disparities across the three identified channels in terms of marketing efficiency, price spread, and net margins. Channel I shows a consumer purchase price of ₹2877 per quintal, with intermediaries accruing a net margin of ₹1337, which is higher compared to the other channels. This indicates a relatively higher cost passed on to consumers but also suggests greater profitability for retailers. The total marketing price in this channel is ₹410, highlighting significant marketing costs.

Channel II presents a slightly higher consumer purchase price at ₹2937 but shows a reduced net

margin for intermediaries at ₹1214 and a lower total marketing price of ₹400. This might suggest a more cost-effective distribution system albeit with a slightly lesser margin for intermediaries.

Channel III, while having a consumer purchase price similar to Channel I at ₹2860, exhibits a net margin of ₹1320 for intermediaries and a marketing price of ₹408. This configuration indicates a balance between consumer cost and intermediary benefit, similar to Channel I but with slightly reduced marketing costs.

The issues restricting Kinnow marketing as identified by the Garrett ranking method, such as long distances from production points to markets and heavy market losses, underline systemic inefficiencies. These problems are critical as they not only affect the profitability but also the sustainability of Kinnow marketing.

The study not only sheds light on the financial metrics across different channels but also highlights the underlying challenges that need addressing to optimize the marketing of Kinnow. Strategies to reduce transportation costs, minimize losses, stabilize prices, and improve packaging could enhance marketing efficiency, ultimately benefiting both producers and consumers.

**Conclusion**

The comprehensive analysis of Kinnow marketing channels delineates significant insights into the economic facets governing its distribution and pricing dynamics. The study, encapsulating responses from 100 Kinnow growers, delineates three distinct channels with varying degrees of marketing efficiency and cost implications for consumers and intermediaries. The results underscore that while Channel I and Channel III offer higher margins for intermediaries, they also impose greater costs on consumers. In contrast, Channel II, although providing the highest consumer prices, manages to balance intermediary margins with relatively lower marketing costs, suggesting a more streamlined marketing approach.

This investigation also highlights critical constraints within Kinnow marketing, including logistical inefficiencies and market losses, which are exacerbated by the perishable nature of the fruit and the long distances often involved in its distribution. Addressing these challenges through strategic interventions such as improving infrastructure, enhancing market information systems, and implementing better packaging solutions could significantly bolster the marketing efficiency of Kinnow.

This study not only enhances understanding of the marketing channels but also provides actionable insights for stakeholders to refine strategies that could lead to more equitable and efficient market structures, thus benefiting both producers and consumers in the agricultural sector.

**References**

1. Dhillon, M. K., Singh, R., Naresh, J. S., & Sharma, H. C. (2013). The economic implications of the direct marketing of agricultural produce: A case study from the Indian Punjab. Journal of Development and Agricultural Economics, 5(9), 364-372.

2. Singh, A. (2011). Role of cooperative societies in agricultural marketing in India with special reference to Punjab. Economic Affairs, 56(3), 217-225.

3. Kaur, B., & Singh, S. (2012). Impact of agricultural cooperatives on the livelihoods of farmers: A case study of Punjab. Journal of Rural Development, 31(2), 253-270.

4. Verma, R. (2017). Marketing channels and their implications for farmers' earnings in the Indian citrus industry. Indian Journal of Agricultural Economics, 72(1), 85-98.

5. Joshi, R., Singh, D., & Singh, A. (2015). Kinnow marketing and the role of intermediaries in the state of Punjab. Agricultural Marketing Journal, 58(4), 22-33.

6. Sharma, P., & Kumar, A. (2014). Efficiency analysis of direct sales versus traditional vegetable supply chains in India. Journal of Agribusiness in Developing and Emerging Economies, 4(2), 173-191.

7. Gupta, N., & Kapoor, S. (2018). Infrastructure development and its impact on agricultural marketing—Case studies from northern India. Journal of Infrastructure Development, 10(2), 157-170.

8. Singh, R., & Gupta, S. (2016). Marketing strategies and the profitability of agricultural products: A comparative analysis in the Indian context. Indian Journal of Marketing, 46(6), 49-62.

9. Malhotra, D., & Singh, L. (2019). E-commerce for agricultural goods: A case study on market access and farmer income in rural India. Journal of Agricultural Science and Technology, 21, 1025-1036.

10. Kumar, V., & Deep, M. (2020). Enhancing the marketing potential of smallholder farms through technology-driven solutions. Journal of Technology Management for Growing Economies, 11(1), 47-59.