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MARKETING DYNAMICS AND EFFICIENCY OF ROSE CUT FLOWERS IN SOUTH GUJARAT INDIA

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ABSTRACT

The study investigates the marketing of rose cut flowers in South Gujarat with emphasis on marketing costs, margins, producer's share in consumer expenditure and efficiency across different marketing channels. Primary data were collected for the year 2023 from rose growers and intermediaries in Bharuch and Surat regulated markets. Three marketing channels were identified: Channel I (Producer → Wholesaler-cum-Commission Agent → Retailer → Consumer), Channel II (Producer → Village-level Merchant → Wholesaler-cum-Commission Agent → Retailer → Consumer) and Channel III (Producer → Retailer → Consumer). Results revealed that Channel I handled the largest share (77.14%) but its efficiency was only moderate (1.94) because of the margins added at each stage. Channel II, involving village-level merchants was the least efficient (1.87) with higher price spread and reduced producer's share. Although Channel III accounted for only 9.73% of sales, it achieved the highest efficiency (3.35) and producer's share (77.01%) highlighting the advantages of direct marketing. The cost analysis showed that spoilage was a major expense for intermediaries, especially retailers reflecting both the perishability of roses and the lack of cold chain facilities. Policy implications include promoting direct marketing models through cooperatives and digital platforms, investment in decentralized cold storage and refrigerated transport, strengthening regulated markets with grading standards and capacity building in post-harvest handling. The findings establish that lowering dependence on intermediaries and improving infrastructure can raise profitability and ensure remunerative returns for rose growers in South Gujarat.

Key words: Rose cut flowers, Marketing channels, Price spread, Producer's share, Marketing efficiency

Introduction

Floriculture in India has grown into a significant branch of horticulture contributing to employment, income diversification and the development of agro based industries. Cut flower cultivation, in particular, has gained prominence due to its dual role in meeting local cultural demands and catering to commercial markets such as hotels, corporate houses and event management firms (Sharma *et al.*, 2022).

In Gujarat, floriculture has steadily expanded with districts such as Navsari, Vadodara, Surat, and Bharuch contributing substantially to the state's flower production. Roses occupy a central position among cultivated flowers

valued for their versatility in religious ceremonies, social functions and decorative uses. The demand for rose cut flowers remains strong, mainly driven by urban centres like Surat and Bharuch where consumption is linked to weddings, festivals and hospitality services (Chandra, 2025).

Rose farming apart from providing cultural and aesthetic value also helps in creating rural employment and income opportunities. Farmers in Bharuch and Surat districts have increasingly adopted rose cultivation due to its relatively quick returns and consistent market demand. However, marketing remains the decisive stage where producers convert their investment into actual cash

income. The efficiency of marketing channels, the extent of price spread and the share of producers in consumer expenditure are key determinants of profitability (Pandey *et al.*, 2023).

Recognizing the importance of rose cultivation in South Gujarat, this study was undertaken in the year 2023 to analyse the economics and marketing efficiency of rose cut flowers in the region. The study examines marketing costs, margins and producer's share in consumer's rupee across different marketing channels with special focus on regulated markets in Bharuch and Surat.

The present investigation was undertaken with the following objectives:

1. To estimate the marketing cost and net price received by rose growers under different purchasing agencies.
2. To analyse the producer's share in consumer's price across different marketing channels of rose cut flowers.
3. To evaluate the marketing efficiency of rose cut flowers using established indices.

Materials and Methods

Sources of Data

Primary data were collected for rose crop during the year 2023. Two major regulated markets Bharuch and Surat were selected for the study as they represent the primary outlets for rose cut flowers in South Gujarat. A purposive sampling method was adopted to ensure representation of key market intermediaries.

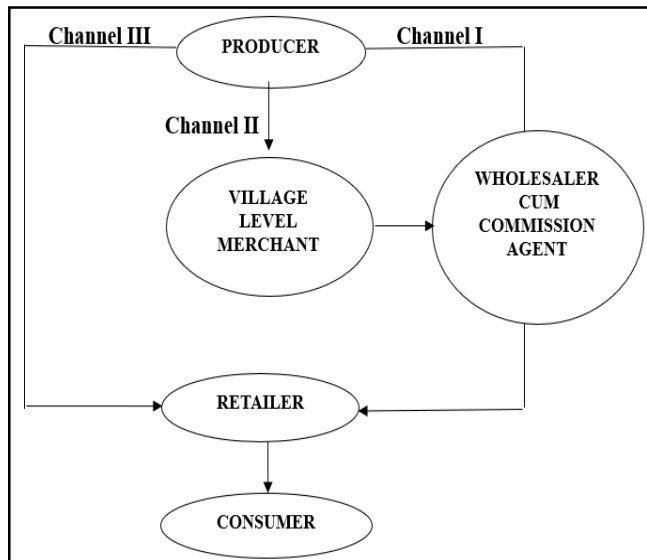


Fig. 1: Existing Marketing Channels for rose in the study area.

From each market, a sample of six traders was selected comprising:

- 2 wholesalers
- 2 village-level traders
- 2 retailers

In total, four wholesalers, four village-level traders and four retailers were interviewed using well-structured questionnaires. Data were also collected directly from rose growers to capture producer-level costs and returns.

Analytical Framework

The marketing efficiency was estimated using the formula proposed by Shepherd (1972):

$$ME = \frac{N}{I}$$

Where:

ME = Index of marketing efficiency

N = Net price received by the farmer (Rs)

I = Total marketing cost (Rs) + Total margin (Rs)

This framework allows for the measurement of efficiency by comparing the net returns to producers against the cumulative costs and margins incurred across marketing channels.

Results and Discussion

Marketing Channels

Rose cut flowers move from producers to consumers through various marketing channels. In Bharuch and Surat districts, three distinct channels were identified (Fig. 1):

- **Channel I:** Producer → Wholesaler-cum-Commission Agent → Retailer → Consumer
- **Channel II:** Producer → Village-level Merchant → Wholesaler-cum-Commission Agent → Retailer → Consumer
- **Channel III:** Producer → Retailer → Consumer

The results presented in Table 1 clearly demonstrate the predominance of Channel I (Producer → Wholesaler-cum-Commission Agent → Retailer → Consumer) in the marketing of rose cut flowers in these districts. Across all plantation years, this channel accounted for the largest share ranging from 70.50% in the first year to 84.40% in the second year and averaging 77.14% across all farms. This dominance reflects the reliance of growers on wholesalers and commission agents who provide assured outlets, bulk handling and access to urban markets such as Surat and Bharuch. Similar findings were reported by Verma (2016) in Indore district, where wholesalers and

Table 1: Rose cut flowers marketed through various marketing channels (Quintals).

Category	Channel I	Channel II	Channel III	Total
First year plantation	267.90 (70.50)	64.98 (17.10)	47.12 (12.40)	380.00 (100.00)
Second year plantation	457.45 (84.40)	51.49 (9.50)	33.06 (6.10)	542.00 (100.00)
Third year plantation	254.17 (73.10)	50.07 (14.40)	43.46 (12.50)	347.70 (100.00)
All farms	979.52 (77.14)	166.54 (13.13)	123.64 (9.73)	1269.70 (100.00)

Source: Field survey; Note: Figures in parentheses indicate percentage to total

commission agents were found to control the majority of rose marketing underscoring the dependence of producers on intermediaries for large-scale distribution.

Channel II (Producer → Village-level Merchant → Wholesaler-cum-Commission Agent → Retailer → Consumer) played a secondary role handling 13.13% of the marketed volume. Its share was relatively higher in the first and third years (17.10% and 14.40%, respectively) but declined to 9.50% in the second year. The presence of village-level merchants facilitates aggregation for smallholders; however, it reduces the producer's share due to additional margins.

Channel III (Producer → Retailer → Consumer), though limited to 9.73% of marketed flowers emerges as an important alternative. Its share was highest in the first and third years (12.40% and 12.50%), though lower in the second year (6.10%). Kumar and Patel (2021) similarly highlighted that direct marketing of marigold flowers in Gujarat enhanced producer margins and reduced the price spread reinforcing the potential of farmer-centric channels.

Marketing Costs

Table 2 provides a breakdown of the marketing costs incurred by producers and intermediaries in the rose marketing channels in the study area. The data reveal that cost structures vary significantly across actors,

reflecting their roles in the supply chain.

For producers, costs were highest in Channel I (Rs 2.50/kg) dominated by transportation (40%) and preparation for market (36%). In Channel II, producer costs were lower (Rs 0.58/kg) with preparation and packing accounting for nearly 86% of total costs. Channel III costs stood at Rs 0.93/kg, where transportation formed the largest share (37.63%). This indicates that producers selling directly to retailers incur relatively higher transportation costs but avoid intermediary margins.

Village-level merchants incurred costs of Rs 1.45/kg with transportation forming nearly 69% of the total. Their role as aggregators for small farmers adds an additional cost which ultimately reduces the producer's share in consumer expenditure.

Wholesalers-cum-commission agents faced costs of Rs 2.20/kg primarily due to spoilage (68.18%). This highlights the vulnerability of roses to perishability and the absence of adequate cold chain facilities.

Retailers bore the highest costs ranging from Rs 3.70/kg in Channel III to Rs 5.10/kg in Channels I and II. Spoilage was the largest component (36–46%) followed by transportation and grading. This reflects the risks retailers face in maintaining flower quality until final sale as roses are highly perishable and sensitive to handling. These findings are consistent with earlier studies on

Table 2: Marketing cost incurred by producer and intermediaries in different channels (Rs/kg).

Intermediary	Particulars	Channel I (Rs)	% to total cost	Channel II (Rs)	% to total cost	Channel III (Rs)	% to total cost
Village-level Merchant	Transportation charges	—	—	1.18	68.97	—	—
	Spoilage	—	—	0.35	20.69	—	—
	Other charges	—	—	0.18	10.34	—	—
	Total cost	—	—	1.71	100	—	—
Wholesaler-cum-Commission Agent	Grading & packing charges	0.53	20.46	0.53	20.46	—	—
	Spoilage	1.76	68.18	1.76	68.18	—	—
	Other charges	0.29	11.36	0.29	11.36	—	—
	Total cost	2.59	100	2.59	100	—	—
Retailer	Transportation charges	1.71	28.43	1.71	28.43	0.94	21.62
	Grading & packing charges	0.94	15.69	0.94	15.69	Rs 0.71	16.22
	Loading & unloading charges	0.53	8.82	0.53	8.82	Rs 0.35	8.11
	Spoilage	2.17	36.28	2.17	36.28	Rs 2.00	45.94
	Other charges	0.65	10.78	0.65	10.78	Rs 0.35	8.11
	Total cost	5.99	100	5.99	100	Rs 4.35	100

Source: Field survey

Table 3: Price spread and marketing efficiency in different marketing channels of rose (Rs/kg).

Particulars	Channel I	Channel II	Channel III
Net price received by producers	69.52 (65.93)	72.61 (65.16)	72.38 (77.01)
Marketing cost incurred by producers	2.94 (2.79)	0.68 (0.61)	1.09 (1.17)
Sale price of producer	72.46 (68.72)	73.29 (65.77)	73.60 (78.18)
Marketing cost incurred by village-level merchant	–	1.71 (1.53)	–
Village-level merchant margin	–	3.47 (3.11)	–
Sale price of village-level merchant / Purchase price of wholesaler	–	78.43 (70.41)	–
Marketing cost incurred by wholesaler-cum-commission agent	2.59 (2.45)	2.59 (2.33)	–
Wholesaler-cum-commission agent margin	8.23 (7.81)	8.23 (7.38)	–
Sale price of wholesaler / Purchase price of retailer	83.28 (78.98)	89.18 (80.12)	–
Marketing cost incurred by retailer	5.99 (5.69)	5.99 (5.38)	4.35 (4.62)
Retailer's margin	16.15 (15.33)	16.15 (14.50)	16.15 (17.20)
Retailer's selling price / Consumer's purchase price	105.45 (100.00)	111.43 (100.00)	93.96 (100.00)
Total Marketing Costs	11.52 (10.92)	10.96 (9.84)	5.44 (5.79)
Total Marketing Margins	24.38 (23.15)	27.85 (25.00)	16.15 (17.20)
Price Spread (Costs + Margins)	35.90 (34.07)	38.81 (34.84)	21.59 (22.99)
Marketing Efficiency	1.94	1.87	3.35

Source: Field survey; Note: Figures in parentheses are percentages by retail price

floriculture marketing by Singh and Sharma (2018) who emphasized that perishability and inadequate storage facilities lead to disproportionately high marketing costs in floriculture crops with retailers bearing the greatest burden due to their proximity to consumers and responsibility for maintaining freshness.

Table 3 presents the price spread and marketing efficiency of rose cut flowers across three channels in the study area for the study year 2023. The results show clear differences in producer's share, marketing costs and margins depending on the marketing route.

In Channel I (Producer → Wholesaler-cum-Commission Agent → Retailer → Consumer), the net price received by producers was Rs 69.52/kg, accounting for 65.93% of the consumer's rupee. The total marketing costs amounted to Rs 11.52/kg while margins reached Rs 24.38/kg. The price spread was therefore Rs 35.90/kg with a marketing efficiency index of 1.94. This indicates that Channel I dominates in terms of volume while efficiency is moderate due to multiple intermediaries and cumulative margins.

In Channel II (Producer → Village-level Merchant → Wholesaler-cum-Commission Agent → Retailer → Consumer), producers received Rs 72.61/kg (65.16% of consumer price). Marketing costs were slightly lower at Rs 10.96/kg but margins were higher at Rs 27.85/kg. The price spread was Rs 38.81/kg resulting in the lowest marketing efficiency index (1.87). The presence of village-level merchants adds an additional layer of cost and margin thereby reducing producer's share and overall efficiency.

In Channel III (Producer → Retailer → Consumer), producers received Rs 72.38/kg which represented the highest share of consumer's rupee (77.01%). Marketing costs were the lowest at Rs 5.44/kg and margins summed upto Rs 16.15/kg. The price spread was only Rs 21.59/kg yielding the highest marketing efficiency index (3.35). This demonstrates that direct marketing channels; though less prevalent are significantly more efficient and farmer-centric. These findings are in line with those of Kumar and Patel (2021), who examined the marketing of marigold flowers in Gujarat and Vimaladhithyan *et al.*, (2023) who studied the price spread and marketing efficiency of jasmine value chains in Tamil Nadu.

Conclusion and Policy Implications

The study on the marketing of rose cut flowers highlights the differences in structure and efficiency across the marketing channels used for rose cut flowers in the study area. Channel I (Producer → Wholesaler-cum-Commission Agent → Retailer → Consumer) dominates in terms of volume handled; however, its efficiency remains moderate due to the cumulative margins and costs added by multiple intermediaries. Channel II (Producer → Village-level Merchant → Wholesaler-cum-Commission Agent → Retailer → Consumer) emerged as the least efficient as involvement of village-level merchants added costs and reduced the producer's share in consumer price. In contrast, Channel III (Producer → Retailer → Consumer), though smaller in scale was the most efficient with highest producer's share and lowest price spread.

The cost analysis shows that perishability and poor

storage facilities raise expenses, especially for retailers who must maintain flower quality until final sale. Spoilage consistently was a major cost for all intermediaries pointing to the need for better cold chain facilities and improved handling. Price spread analysis further confirms that direct marketing channels not only minimize costs but also maximize producer returns thereby enhancing overall marketing efficiency. The Shepherd's index values reinforce this conclusion, with Channel III achieving an efficiency score of 3.35 compared to 1.94 and 1.87 for Channels I and II respectively.

Overall, the study shows that wholesale channels are important for large-scale distribution but reduce efficiency and limit fair returns to growers. Strengthening direct marketing channels, lowering dependence on intermediaries and addressing infrastructure gaps can make rose cultivation more profitable and sustainable in the region.

Building on these findings, some policy measures recommended are:

- **Promotion of direct marketing models:** Encourage farmer cooperatives and producer companies/ organisations to establish direct retail outlets or digital platforms that connect growers with consumers, thereby reducing intermediary dependence.
- **Cold chain and storage infrastructure:** Invest in decentralized cold storage units and refrigerated transport facilities to reduce spoilage and marketing costs.
- **Strengthening regulated markets:** Introduce scientific grading standards and certification mechanisms to improve transparency and quality assurance.
- **Capacity building:** Provide training for farmers and intermediaries on post-harvest handling, grading and packaging to minimize losses.
- **Policy incentives for alternative channels:** Promote contract farming arrangements with hotels, event managers and corporate buyers.
- **Market diversification and export Orientation:** Facilitate linkages with national and international floriculture markets through export promotion schemes and compliance support for quality standards.

In essence, the study highlights that reducing the role of middlemen, strengthening infrastructure and enabling growers through cooperative and digital platforms can significantly boost profitability and long-term sustainability in the floriculture sector. Such measures would improve producer incomes and support balanced growth in the rose sector of South Gujarat.

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