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Growth and Marketing Efficiency of Horticultural Crops in Kaparada, Gujarat

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Abstract
The study investigates the growth patterns and marketing efficiency of key horticultural crops in the Kaparada area of Valsad district, Gujarat. Over the past few decades, Gujarat has witnessed remarkable agricultural development, with horticulture emerging as a vital driver of the rural economy. This research focuses on understanding the performance of marketing channels for tomato and sweet potato in the Nana Pondha market of Kaparada region. Primary data were collected from producers, intermediaries, and retailers to analyze marketing costs, price spread, and efficiency across different channels. The findings reveal significant variation in marketing efficiency, with channel-I demonstrating the highest efficiency due to the absence of multiple intermediaries and reduced consumer price, while channel-III exhibited the lowest efficiency because of higher costs and wider price spread. The results highlight the importance of efficient market linkages in enhancing farmers' income and reducing consumer burden. The study underscores the role of government initiatives, cooperative efforts, and improved market infrastructure in strengthening horticultural value chains. Policy recommendations emphasize the need for reducing intermediary layers, promoting direct farmer-consumer linkages, and encouraging collective marketing to ensure sustainable growth and equitable returns in the horticulture sector of Kaparada, Gujarat.

Keywords: Horticulture crops, Market efficiency, price spread, Marketing channel, value chain

Introduction
Horticulture has become a major driver of agricultural growth in India, and Gujarat has seen substantial expansion in area and production for several horticultural crops. Kaparada (Valsad district) is a significant horticultural producing region, especially for vegetables such as tomato and root crops like sweet potato. This paper examines the marketing channels, marketing costs, price spread, and marketing efficiency of selected horticultural crops in Kaparada. The objectives are to (1) document growth and cropping patterns, (2) identify key marketing channels, and (3) measure marketing efficiency and producer share across channels.

Objectives
1. To document growth and cropping patterns in Kaparada.
2. To identify key marketing channels for target horticultural crops.
3. To analyze marketing costs, margins, price spread, and marketing efficiency.
4. To recommend policy and market interventions for improved efficiency.

Literature Review
Several recent studies have examined marketing efficiency and value chains for vegetables and other horticultural crops in India. Field-level assessments consistently show that producer share in the consumer rupee for perishable vegetables is often limited by multiple intermediaries and inadequate post-harvest infrastructure (Chand, 2020) [3].
Value-chain analyses highlight opportunities from reduced perishability, improved cold chains, and farmer organizations to capture greater value.
Work specific to vegetable markets reports similar patterns of high marketing margins at wholesale and retail stages and documents methods to compute marketing efficiency (Acharya's method), used widely across Indian studies.

Methodology

The study used a mixed-methods approach. Primary data were collected via structured questionnaires from a stratified sample of farmers (tomato and sweet potato producers), wholesalers, commission agents, and retailers in the Kaparada/Nana Pondha market during the main marketing seasons. Secondary information on regional horticulture trends was gathered from government reports and published literature. Marketing channels were mapped from farmgate to consumer, and marketing cost, margin, price spread, producer's share, and marketing efficiency were calculated using standard formulas (marketing efficiency = value of output / marketing cost).

Results & Discussion

During the study only four channels were prevailing in Nana pondha market. These channels are discussed under sub heads.

1.) Channel-1 (Producer-Consumer)

In this channel commodity moved from producer to consumer directly. It was the shortest possible channel with two players in the chain. The price received by the farmers was more as compared to other channels because in this channel no intermediaries there as were involved. In this channel marketing efficiency was more due to direct transaction between producer and consumer.

2.) Channel-2 (Producer-Retailer-Consumers)

In this channel the commodity moved from producer to retailer and then it reaches to consumer. The price received by the farmers was less than the price received by the farmer in channel-1, due to the presence of intermediary. The marketing cost and margin were involved in this channel.

3.) Channel-3 (Producer-Wholesalers-retailer Consumers)

In this channel the commodity moved from producer to wholesaler and then retailer and then it reaches to consumer. The price received by the farmer is less than the price received by the farmer in channel-1 and channel-2, due to the presence of more number of intermediaries. In this channel, marketing cost and margin are high and marketing efficiency is poor.

Channel-4 (Producer-Commission Agent-Wholesaler-Retailer-Consumers)

In this channel the commodity moved from producer to commission agent and the retailer and then it reached to consumer. The price received by the farmer was less than the price received by the farmer in channel-1, channel-2, channel-3, due to presence of more intermediaries. In this channel, marketing cost and margin was very high and Marketing efficiency was very poor because of high price charged by the commission agent.

Table 1: Marketing cost, Marketing efficiency and price spread of tomato, nana pondha market (per quintal)

Sr. No.	Particular	C-1	C-2	C-3	C-4
1	**Farmer's price**	1250	1250	1250	1250
	Marketing cost				
2	Loading & unloading	25	25	25	25
2.1	Transportation	40	40	40	40
	Others	45	45	45	45
	Sub Total	**110**	**115**	**115**	**105**
2.2	**Commission Agent**				
	Commission (6%)				49
	Sub Total				**49**
	Wholesaler				
	Grading & sorting			30	
	Loading charges			15	
2.3	Commission charges			05	
	Transportation cost			30	
	Market fee			06	
	Storage and spoilage			15	
	Sub Total			**101**	
	Retailer				
	Weighing charges		15	15	15
2.4	Packaging		20	20	20
	Market fee		06	06	06
	Commission		04	04	04
	Storage and spoilage		15	15	15
	Sub Total		60	60	60
	Grand Total	110	175	276	241
	Consumer Price	1360 (100)	1365 (100)	1526 (100)	1491 (100)
	Price spread	8.08	8.42	18.08	16.16
	Marketing efficiency	12.36	11.86	5.52	6.18

The price spread was highest was observed in channel-3 with 18.08 per cent followed by channel-4 (16.16 per cent), channel-2 (8.42 per cent) and lowest in channel-1 (8.08 per cent). It means channel-3 is inefficient and most efficient channel was channel-1. Marketing efficiency has been worked out and presented in table 1. for tomato since the marketing cost and price spread in channel-3 was higher, the marketing efficiency was very low for channel-3. For channel-1 due to saving of marketing in absence of market intermediaries and relatively low consumer's price, the marketing efficiency was higher. It was highest for channel-1 with 12.36 per cent and lowest in channel-3 with 5.52 percent. Thus, channel-1 is more efficient than all other channel in case of marketing of tomato in nana pondha market.

Table 2: Marketing cost, Marketing efficiency and price spread of Sweet potato, nana pondha market (per quintal)

Sr. No.	Particular	C-1	C-2	C-3	C-4
1	**Farmer's price**	2300	2300	2300	2300
	Marketing cost				
2	Loading & unloading	20	20	20	20
2.1	Transportation	30	30	25	40
	Others	50	45	35	35
	Sub Total	**100**	**95**	**80**	**95**
2.2	**Commission Agent** Commission (6%)				27
	Sub Total				**27**
	Wholesaler				
	Grading & sorting			15	
	Loading charges			10	
2.3	Commission charges			05	
	Transportation cost			15	
	Market fee			06	
	Storage and spoilage			06	
	Sub Total			**57**	
	Retailer				
	Weighing charges		12	12	12
	Packaging		10	10	10
2.4	Market fee		06	06	06
	Commission		05	05	05
	Storage and spoilage		08	08	08
	Sub Total		41	41	41
	Grand Total	100	136	178	163
	Consumer Price	2400 (100)	2436 (100)	2478 (100)	2463 (100)
	Price spread	4.16	5.58	7.18	6.61
	Marketing efficiency	24	17.91	13.92	15.11

Total highest marketing cost was observed in channel-3 (178Rs/qt) followed by channel-4 (163Rs/qt), channel-2 (136Rs/qt) and lowest was in channel-1 (100Rs/qt). Respectively (table 4.2). price spread was highest in channel-3 (7.18 per cent) and lowest in channel-1 (4.16 per cent) for Sweet potato in Nana pondha market. Marketing efficiency has been worked out and presented in Table 2. for Sweet potato. Since the marketing cost and price spread in channel-3 was higher, the market efficiency was very low for channel-3. In channel-1, due to absence of market intermediaries and relatively low consumer's price, the marketing efficiency was found to be higher as compared to other channels (Table 2.). thus, channel -1 is more efficient than all other channels of marketing of sweet potato in nana pondha market.

Conclusion & Policy Implications

The study concludes that strengthening direct market linkages, promoting collective marketing, and investing in post-harvest and market infrastructure are critical for improving marketing efficiency in Kaparada. Policy and local-level actions that reduce unnecessary intermediaries and enable farmers to access market information and aggregation services will increase producer income and contribute to inclusive horticulture growth in Valsad.

Key policy recommendations

1. Support formation and capacity building of FPOs and farmer cooperatives in Kaparada.
2. Invest in local aggregation centres and low-cost cold chain solutions to reduce perishability losses.
3. Promote digital market information and price discovery tools for smallholders.
4. Encourage direct marketing platforms (farmers' markets, contract arrangements) to shorten the price spread.

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