

## Impact of Corporate Retailing on Price Spread Of Cauliflower in Odisha

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**Abstract:** The research study was conducted to know the impact of corporate retail marketing on price spread and profit of cauliflower cultivators in Bhubaneswar, Khurda district of Odisha. Data were collected through a well prepared questionnaire from farmers supplying cauliflower through corporate retail market channel and traditional market channel. Three market channels were found out in the study area. Those were channel I: producers-commission agent-wholesaler-retailer-consumer, channel II: producer-wholesaler-retailer-consumer and channel III: producer-corporate market collection centre -corporate retail market's city processing centre retail outlet- consumers. Marketing cost (Rs. 25162.86) was highest for channel I and lowest for channel III and it was Rs. 9390/ha. Producers supplying their produce to corporate retail market's collection centre i.e. channel III were getting highest profit (Rs 3.49/Kg) than other two market channel. In channel I, producer's share in consumer's rupee was 32.93 percent. In channel II producer's share in consumer rupee was 35.93 percent and in channel III producer's share in consumer rupee was highest and it was 51.66 percent. Net margins of intermediaries were highest in channel I (36.5 percent) and it was less in channel III (22.5 percent) indicating that marketing efficiency was highest for channel III.

**Keywords:** Cauliflower, Corporate Retailing, Odisha, Price Spread.

### I. Introduction

The Indian retail industry has scaled impeccable growth over the last decade with an amiable acceptance to organised retailing formats. India has been ranked as the fourth most attractive nation for retail investment among 30 emerging markets by the US-based global management consulting firm, A T Kearney, in its Global Retail Development Index (GRDI) 2011[1]. Hence, there is a great potential to be explored by domestic and international players. The industry is maturing towards modern concept of retailing, cornering the conventional unorganised family-owned businesses. The penetration of organized retail in the field of vegetable retailing has faced resistance from traditional retailers. Despite several trader organization, NGOs and association of street vendors opposing the massive expansion of organized retail because of a loss to livelihood, many industry and policy circles believe it will have positive impacts on the agricultural supply chain and raise prices.

### II. Methodology

The present investigation was conducted at Bhubaneswar, Odisha. Data was collected during January 2011 – April 2011. to study the impact of corporate retailing on price spread of cauliflower and marketing efficiency of different supply chain data were collected from 100 farmers. Out of these 100 farmers 40 farmers were supplying their produce to corporate retail outlet i.e. Reliance Fresh and other 60 farmers were supplying their produce to local mandi. Farmers supplying their produce to corporate retail outlets were termed as corporate retail market farmers (CRM farmers) and farmers supplying their produce through traditional market channels were termed as traditional retail market farmers (TRM farmers). Data were collected through a well prepared pretested schedule. Cost of cultivation, incremental benefit cost ratio, marketing margin, producers share in consumer's rupee, marketing efficiency was calculated for each supply chain.

### III. Results & Discussion

#### 1. Existing Pattern of market channels in Selected Areas

In the area taken up for the study three channels were identified. They were as follows:

##### Channel-I

Producers → Commission agents → Wholesalers → Retailers → Consumers

##### Channel- II

Producers → Wholesalers → Retailers → Consumers

**Channel- III**



**2. Cost of cultivation of cauliflower**

Table presents the cost of cultivation of cauliflower per hectare of different farmers categorized by the first buyer or market that they sell to. The cost of various agronomic practices for farmers supplying to commission agent and wholesaler was not at par except marketing cost. Marketing cost (Rs. 25162.86/ha) was highest for farmers whose first buyer was commission agent i.e. for channel.

Marketing cost incurred by collection centre farmers was Rs. 9360/ha and for farmers supplying to wholesaler it was Rs 11208/ha. Producers selling their produce to collection centre were spending Rs.11,740.00/ha, Rs10902.50/ha and Rs.15439.50/ha on nursery, intercultural operation and plant protection respectively. In comparison to CRM producers TRM producers were spending less on nursery, intercultural operation and plant protection. The total cost of cultivation was highest for CRM producers which was Rs 90942/ha. The cost of cultivation of cauliflower for producers supplying their produce to commission agents and wholesalers was Rs 84348.57 and Rs 71284 respectively.

**Table. Cost of cultivation of cauliflower (Rs/ha)**

Market channel	Cost of cultivation (Rs/ha)	Average price (Rs/quintal)	Average yield (quintal/ha)	Gross return (Rs.)	Net profit (Rs.)	Net Profit (Rs/kg)
I	83438.54	600.00	250.90	150540.00	67101.46	2.67
II	71284.00	525.00	250.40	131460.00	60176.00	2.40
III	90942.00	700.00	259.38	181566.00	90624.00	3.49

Note: Figures in parentheses are percentage to the total cost

Source: Field investigation

**3. Farmer's profit for cauliflower**

It is evident from Table that farmers using channel II was getting less profit than other two supply chain. Profit for channel II was Rs 2.40/kg of the produce. Producers supplying their produce to corporate retail market's collection centre i.e. channel III were getting highest profit (Rs 3.49/Kg) than other two market channel. The findings of Mangala and Chengappa, (2008) [2] are in conformity with the present study findings.

**Table. Farmer's profit for cauliflower**

Sl. no	Agronomic practices	First buyer or market of the farmers		
		Commission agent	wholesaler	Collection centre
1	Land preparation	17254.29(20.45)	16920.00(23.73)	21,840.00(24.01)
2	Nursery	8598.57(10.19)	8640.00(12.12)	11,740.00(12.90)
3	Transplanting	6342.85(7.51)	7092.00(9.94)	7785.00(8.56)
4	Irrigation	3642.85(4.31)	3864.00(5.42)	5385.00(5.92)
5	Intercultural operation	7165.71(8.49)	6984.00(9.79)	10902.50(11.98)
6	Plant protection	8895.70(10.54)	9592.00(13.45)	15439.50((16.97)
7	Harvesting	7285.71(8.63)	6984.00(9.79)	8490.00(9.33)
8	Marketing	25162.86(29.83)	11208.00(15.72)	9360.00(10.29)
9	<b>Total</b>	<b>84348.54</b>	<b>71284.00</b>	<b>90942.00</b>

Source: field investigation

**4. Incremental Cost-Benefit analysis for cauliflower**

Market channel II was 1<sup>st</sup> compared with market channel I. Market channel I was preferred since incremental CB ratio was 1.56 i.e. greater than 1. Channel II was excluded from further analysis. Channel I was compared with channel III. The incremental CB ratio was found to be 2.54. Hence from the following Table it was found that spending additional amount of Rs 19658 on market channel III will yield Rs 50102.5 of additional benefit.

**Table. Incremental CB analysis for cauliflower**

Marketing channels	Benefit In Rs.	Cost In Rs	CB ratio	Comparison of Marketing channels	Incremental Benefit In Rs.	Incremental Cost In Rs.	Incremental CB ratio
Channel II	131460.00	71284.00	1.84				
				Channel II and I	19080.00	12154.54	1.56
Channel I	150540.00	83438.57	1.80				
				Channel I and III	31026.00	7503.46	4.13
Channel III	181566.00	90942.00	1.99				

**5. Price spread in cauliflower**

Based on the detailed data presented in Table, the price spread in all three marketing channels was worked out. In channel I, commission agent’s margin was 6.42 percent, wholesaler’s margin was 7.71 percent, retailer’s margin was 13.57 percent and producer’s share in consumer’s rupee was 32.93 percent. In channel II wholesaler’s margin was 13.00 percent, retailer’s margin was 17.88 percent and producer’s share in consumer rupee was 35.93 percent. In channel III the market margin for corporate retail market was 22.5 percent and producer’s share in consumer rupee was highest and it was 51.66 percent.

**Table. Price Spread in Different Channels for cauliflower**

Sl. no	Particulars	Channel I	Channel II	Channel III
1.	<b>Expenses incurred by farmer</b>			
	a. Labour	5.00 (0.35)	5.00 (0.41)	20.00 (1.66)
	b. Packing, loading and unloading	24.00 (1.71)	28.00 (2.33)	35.00 (2.91)
	c. Commission charge	59.85(4.27)	0.00(0.00)	0.00(0.00)
	d. Transportation	40.00 (2.85)	35.00 (2.91)	25.00 (2.08)
	e. Personal expenses	10.00 (0.71)	15.00 (1.25)	0.00(0.00)
	<b>Sub total</b>	<b>138.85(9.91)</b>	<b>83.00 (6.91)</b>	<b>80.00 (6.66)</b>
2.	<b>Producers sale price/Commission agent’s/Wholesaler’s/ORM’s purchase price</b>	600.00 (42.85)	525.00 (43.75)	700.00 (58.33)
3.	<b>Net price received by the farmer</b>	461.15(32.93)	442.00 (36.83)	620.00 (51.66)
4.	<b>Expenses incurred by the commission agent</b>			
	a. Labour	7.00 (0.50)	-	-
	b.Packing,loading and unloading	28.00 (2.00)	-	-
	c. Transportation	50.00 (3.57)	-	-
	d. Shop rent	30.00 (2.14)	-	-
	e. Market entry fee	25.00 (1.78)	-	-
	f. Personal expenses	20.00 (1.42)	-	-
	<b>Sub total</b>	<b>160.00 (11.42)</b>	-	-
5.	<b>Commission agent’s margin</b>	90.00 (6.42)	-	-
6.	<b>Commission agent’s sale price</b>	850.00 (60.71)	-	-
7.	<b>Expenses incurred by the wholesaler</b>			
	a. Labour	7.00 (0.50)	10.00 (0.83)	-
	b.Packing,loading and unloading	20.00 (1.42)	30.00 (2.50)	-
	c. Transportation	40.00(2.85)	60.00 (5.00)	-
	d. Shop rent	25.00 (1.78)	30.00 (2.50)	-
	e. Market entry fee	30.00 (2.14)	30.00 (2.50)	-
	f. Personal expenses	20.00 (1.42)	25.00 (2.08)	-
	<b>Sub total</b>	<b>142.00 (10.14)</b>	<b>185.00 (15.41)</b>	-
8.	<b>Wholesaler’s margin</b>	108.00 (7.71)	150.00 (12.50)	-
9.	<b>Wholesaler’s sale price</b>	1100.00 (78.57)		
10.	<b>Expenses incurred by the retailer</b>			
	a. Labour	5(0.35)		
	b.Packing,loading and unloading	20(1.42)		
	c. Transportation	25(1.78)	25(2.08)	20(4.10)
	d. Shop rent	15(1.07)	20(1.66)	60(5.00)
	e. Market entry fee	25(1.78)	25(2.08)	-
	f. Personal expenses	20(1.42)	25(2.08)	-
	<b>Sub total</b>	<b>110(7.85)</b>	<b>130(10.83)</b>	<b>230(19.16)</b>
11.	<b>Retailer’s margin</b>	190(13.57)	210(17.50)	270(22.50)
12.	<b>Retailer’s sale price/Consumer’s purchase price</b>	1400.00	1200.00	1200.00
13.	<b>Producer’s share in consumer’s rupee (%)</b>	32.93	36.83	51.66

Continued.....

Note: Figures in parentheses are percentage to consumer’s purchase price

Source: Field investigation

### 6. Marketing Efficiency of Different Channels for Cauliflower

The following Table presents marketing efficiency for cauliflower. Net margins of intermediaries were highest in channel I (36.5 percent) and it was less in channel III (22.5 percent). Marketing efficiency was highest for channel III i.e. for corporate retail market both by Shepherd's method (3.87) and by Acharya's method (1.06) followed by supply chain II.

**Table . Marketing Efficiency of Different Channels for Cauliflower**

Sl no.	Particulars	Channel I	Channel II	Channel III
1.	Retailer's sale price/Consumer's purchase price(Rs/quintal)	1400.00	1200.00	1200.00
2.	Total marketing cost(Rs/quintal)	550.85	398.00	310.00
3.	Total net margins of intermediaries(Rs/quintal)	388.00(27.71)	360.00(30.00)	270.00(22.50)
4.	Net price received by farmers(Rs/quintal)	461.15	442.00	620.00
6.	Index of marketing efficiency(Ratio)			
	a. Shepherd's method	2.54	3.01	3.87
	b. Acharya's method	0.49	0.58	1.06

Note: Figures in parentheses are percentage to consumers purchase price

Source: Field investigation

### IV. Conclusion and Policy Suggestion

This paper makes an attempt to study the impact of corporate retail market linkage on farmers. The major advantage for producers associated with CRM was in the form of reduction in marketing cost, higher productivity. The price paid by the corporate retail chain collection centres for cauliflower was much higher than the traditional retail market producers received. In comparisons to CRM producers TRM producers were spending less on nursery, intercultural operation and plant protection. The total cost of cultivation was more for CRM producers compared to TRM. It is because producers of corporate retail market were spending more on nursery, intercultural operation and plant protection than what their counter parts were doing. Another reason for more cost of cultivation is that labour requirement was more for corporate retail market producers. The findings of Agarwal and Saini, (1995) [3] and Joseph et al. (2008) [4] are in conformity with the present study findings.

The net price received by producers under traditional marketing channel was lower as compared to CRM marketing channel. The producers share in consumer rupee improved with the corporate retail chain marketing system. In the corporate retail chain marketing channel the producers share in consumer rupee for vegetable under study was higher compared to traditional marketing channel. Corporate retail market was also found to be more efficient compared to traditional retail market. The findings of Sulaiman *et al.* (2011) [5] are in conformity with the present study findings.

In the light of the above findings the following policy changes are suggested:

- Producers associationship should be encouraged by the government to promote direct marketing in order to reduce the unwanted clutches of intermediaries.
- More farmers should be encouraged to have linkages with corporate retail markets as they reduces the marketing costs incurred by the farmers, increases the marketing efficiency and producer's share in consumer's rupee.

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