

Economic Analysis of Marketing of Bitter Gourd (*Momordica Charantia L*) in Raigad District (M.S.)

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Abstract: The present study entitled "Economic analysis of marketing of bitter gourd (*Momordica charantia L*) in Raigad District (M.S.)" was undertaken with the specific objective such as to estimate price spread in different marketing channels, with a cross sample of 120 bitter gourd cultivators and 45 intermediaries. Study revealed that, In marketing of bitter gourd three channels were observed viz., I) Producer – Consumer, II) Producer – Retailer – Consumer, III) Producer – Commission/wholesaler agent – Retailer – Consumer. Of the sample cultivators, majority of farmers (60.00) and the maximum quantity (59.33%) sold through channel III. However, the producer share in consumer's rupee was highest (98.28%) in channel I followed by (82.76%) in channel II and 68.97% in channel III. The marketing efficiency estimated by using modified Shepherd's formula, was higher (57.91%) in channel I, than that of (19.83%) in channel II and (9.44%) in channel III. This revealed that, the marketing margins were taken away by the market intermediaries in channel III and channel I resulted in poor efficiency in the marketing of bitter gourd.

Keywords: Marketing costs, marketing margin, price spread, marketing efficiency

INTRODUCTION

Agriculture is the largest and most important sector of the Indian economy. Over 65 per cent of the rural households depend on agriculture. Today agriculture is being modernized and marketing is also fast changing but the rate of technology and yield increasing inputs is affected by the prices of inputs and output. Simultaneously, consumers also expect the availability of goods at reasonable prices. For achieving these conflicting objectives, marketing system for agriculture commodities and input has to understand by all the section of the population viz., farmers, traders, consumers, extension workers, scientist, sociologists, administrators, planners and politicians (Acharya *et al.* 1999). Indian agriculture faces some big problem such as fluctuation in agriculture prices, share of producers in consumer rupee, illiteracy, middleman, fragmented land, instability in production, suicide of farmers and rate

of population growth has been increasing without any increase in cultivated land. Vegetable nowadays, are considered as most profitable cash crops, and can play important role in raising economic status to small and marginal farmers as well as it provide source of many nutrients. Among the various families of vegetables, the family cucurbitaceous consists five species are grown worldwide for their edible fruit, variously know as summer squash, winter squash, pumpkins and gourds like bottle gourd, little gourd, bitter gourd, *etc.*

The bitter gourd is originated in India in Konkan region of Maharashtra and more particularly in Raigad district grown throughout the year. The commercial cultivation of bitter gourd was found to Pen and Panvel tehsil's of Raigad district. Also this tahsils is in close vicinity to Mumbai metropolitan region and surrounded by APMC,

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Vashi (New Mumbai), APMC, Panvel and Pen. Therefore, to understand the economics of marketing of this crop the present study entitled, "Economic analysis of marketing of bitter gourd (*Momordica charantia* L) in Raigad district" was undertaken.

METHODOLOGY

Selection of market and market functionaries

Markets were selected on the basis of their advantages. That is APMC, Vashi (New Mumbai), Local Pen market, APMC Panvel these three markets were selected for present study. In case of market functionaries 15 wholesaler/commission agent, 30 retailers were selected randomly from these three markets. That is 45 market functionaries were drawn randomly from markets. The present study is based on primary and secondary data to fulfill the objectives. Primary data obtained from farmers, market functionaries. However, a sampling frame was constructed and pre-tested scheduled was used to gather data by personal interview method during month of February, 2015.

Analysis of data

Marketing cost (Grading charges, packaging charges, transport charges, hamali and tolai, rent of stall, electricity charges, charity, loading and unloading charges, etc.), marketing margin of middleman (The difference between price paid by consumer and price received by the producer for an equivalent quantity of farm produce) and price spread (The difference between price paid by the ultimate consumer and the net price received by the producer-seller.) for each channel of bitter gourd vegetable was calculated. The index of marketing efficiency in each channel is measured by using modified Shepherd's formula (Shepherd's approach). Higher the ratio, higher the efficiency and vice-versa.

Modified Shepherd's formula

$$ME = V - 1 \left(\frac{X100}{I} \right) \quad (1)$$

Where,

ME = Index of marketing efficiency

V = Value of the goods sold/consumers price (Rs. /q)

I = Total marketing cost (Rs/q)

in channels was calculated by using modified Shepherd's formula (approach).

Producers share in consumer's rupee (PSCR)

This was the percentage of the net price received by the producer (NPP) to the price paid by the consumer (PPC).

$$PSCR = \frac{PRP}{PPC} \times 100$$

RESULTS AND DISCUSSION

Marketing of bitter gourd

Marketing of any surplus commodity is equally important as that of the production of the commodity. If the practices followed in marketing and channel used for sell of the commodity are not proper then the benefits of good production will reach in the hands of middlemen instead of farmers. Therefore detail information of marketing practices followed, marketing channels used, marketing cost and price spread was collected from the farmers and market agencies. The results of analysis are presented in this part.

Channel wise disposal of bitter gourd

The main channels of marketing of bitter gourd identified in the study area were as follow:

- 1) Producer - consumer
- 2) Producer - retailer - consumer
- 3) Producer - commission agent cum wholesaler - retailer - consumer

It was observed from the table 1 that, maximum number of bitter gourd cultivator 60.00 and maximum proportion of marketable surplus (59.33%) distributed through the third channel. First channel was used by 20.00 bitter gourd farmers and 11.98 per cent of the marketable surplus marketed through first channel which was direct channel. Whereas, 40.00 bitter gourd cultivators were used

Table 1
Channel-wise marketing of bitter gourd

<i>Sr.no</i>	<i>Channels of marketing</i>	<i>Number of cultivators</i>	<i>Average quantity of marketed surplus passed through the channel (qtl.)</i>
1.	Producer – consumer	20.00	3.10 (11.98)
2.	Producer – retailer – consumer	40.00	7.40 (28.68)
3.	Producer – commission agent cum wholesaler – retailer – consumer	60.00	15.35 (59.33)
	Total	120.00	25.87 (100)

(Figures in parenthesis indicated percentage to total)

the II Channel and out of total marketable surplus 28.68 per cent produce disposed through II channel.

Agency-wise bitter gourd quantity handled

It is observed from Table 1 that, in all the groups the bitter gourd was sold through the different agencies except medium and large group where produce was not sold directly to the consumers. At the overall per farm level, 25.87 quintal quantity sold through all the agencies value received was Rs.54895. and that, the major quantity 15.35 q (59.33%) were sold through wholesaler/commission agent followed by 7.40 q (28.68%) sold through retailer and 3.10 q (11.98%) sold to consumer.

Marketing expenses incurred by different agencies

It was observed from Table 2 that, the per quintal total marketing expenses accounted for Rs.37.85, Rs.97.56, Rs.179.10 to producer, retailer, wholesaler/commission agent, respectively. However, among the various items of marketing expenses, at producer level it was observed that, the transportation cost was maximum (Rs. 20) followed by packaging charges (Rs. 10), loading and unloading charges (Rs. 4), labour wages charges (Rs. 1.20) and other charges (Rs. 2.30).

In case of retailer out of total marketing cost of bitter gourd, the per quintal marketing cost was accounted maximum for transportation (Rs. 35), which was followed by electricity charges (Rs. 12.50), rent of stall (Rs. 9.56), grading charges (Rs.8.20), interest on capital investment (Rs.6.30),

depreciation on equipment (Rs. 6.00), wages to labour (Rs. 5.25), loading and unloading (Rs. 3.50), market fee (Rs. 2.75), packaging (Rs. 2.50). Similarly in case of wholesaler/commission agent and out of total marketing cost incurred for per quintal of bitter gourd, the maximum cost was accounted commission charges (Rs. 60.00/q) which was followed by transportation charges (Rs. 45.00/q), packaging charge (Rs. 14.20/q), electricity charges (Rs. 10.50/q), rent of stall (Rs. 8.10/q), loading and unloading charges (Rs. 6.68/q), wages (6.65/q), postage charges (6.25/q), grading charges (Rs. 5.50/q), other miscellaneous charges (4.52/q), market fees (4.50/q), tolai charges (2.35/q), interest on capital (Rs.2.10/q), depreciation on equipment's and tools (1.50/q), levy (0.50/q), licences fee (Rs.0.25/q). Charges (Rs.2.50), and other charges (Rs.5.25).

Price spread and market efficiency

Price spread consists of marketing expenses and margin of intermediaries, which ultimately determined the overall effectiveness of a marketing system and efficiency of the marketing system.

Price paid by consumer and producer's share in consumer's rupee

It was observed from Table 3. that, price per quintal paid by the consumer was Rs.2104.00, Rs.2537.35 and Rs.2899.56 in channel I, channel II and channel III, respectively. The producer's share in consumer's rupee was highest 98.28 per cent in channel I

Table 2
Per quintal marketing expenses incurred by different agencies in bitter gourd

(Figures in Rs. per q)

<i>Sr.no</i>	<i>Items of cost</i>	<i>Producer</i>	<i>Retailer</i>	<i>Wholesaler/comm. agent</i>
1.	Grading charges	-	8.20	5.50
2.	Packaging charges	10.00	2.50	14.20
3.	Transport cost	20.00	35.00	45.50
4.	Loading and unloading (Hamali charges)	4.00	3.50	6.68
5.	Tolai charges	-	-	2.35
6.	Postage charges	-	-	6.25
7.	Market fees	-	2.75	4.50
8.	Electricity charges/petromax	-	12.50	10.50
9.	Levy	-	-	0.50
10.	Commission charges	-	-	60.00
11.	Charity	-	0.50	-
12.	Depreciation on equipment and tools	-	6.00	1.50
13.	Interest on capital invested	0.35	6.30	2.10
14.	Rent of stall	-	9.56	8.10
15.	Licences fee	-	0.25	0.25
16.	Wages	1.20	5.25	6.65
17.	Other charges (maintenances, wt. balance, and plastic bage.)	2.30	5.25	4.52
	Total	37.85	97.56	179.10

followed by 82.76 per cent in channel II and 68.97 per cent in channel III.

Therefore, In conclusion, the involvement of intermediaries particularly wholesaler/ commission agent and retailer has decrease the producer's share in consumer's rupee to considerable extent. And also the reduction in intermediaries was advantageous to producers, on the contrary there services were essential, who reaped large chunk of producer's share from consumer rupee. Producer's share in consumer's rupee was the lowest in channel III and channel II involving a large chain of intermediaries, the net price received by producer in channel I was highest (2167).

Total marketing cost incurred by producer and other agencies

The per quintal cost incurred by producer and other agencies involved in the marketing were highest in channel III (Rs.307.01) that is 10.58 per cent of

consumer price, followed by 5.04 per cent and 1.72 per cent in channel II (Rs.127.91) and channel I (Rs.37.85), respectively. It was minimum in channel I due to producer sold their produce directly to the consumer. It can be concluded that, increase in number of intermediaries in the channel increase the marketing expenses and reduces the share of producer's in consumer's rupee and vice-versa.

Marketing margin of intermediaries

The total marketing margin of all intermediaries was highest 20.26 per cent in channel I followed by 12.19 per cent of consumer's price in channel II, respectively.

Marketing efficiency (ME)

Marketing efficiency (ME) is essentially the degree of market performance. It is considered as indicators or measures for comparing or asses the efficiency of the alternate marketing channel/system.

Table 3
Channel-wise per quintal price spread and marketing efficiency in marketing of bitter gourd

(Figures in Rs. /per q)

<i>Sr.no</i>	<i>Particulars</i>	<i>Channel I</i>	<i>Channel II</i>	<i>Channel III</i>
1	Net price received by producer	2167	2100	2000
2	Cost incurred by producer	37.85 (1.72)	30.35 (1.19)	30.35 (1.04)
3	Purchase Price by wholesaler/commission agent	-		2035.35
4	Cost incurred by wholesaler/commission agent	-		179.10 (6.18)
5	Marketing margin by wholesaler/commission agent	-		236.74 (8.16)
6	Purchase Price by retailer	-	2130.35	2451.19
7	Cost incurred by retailer	-	97.56 (3.84)	97.56 (3.36)
8	Marketing margin by retailer	-	309.44 (12.19)	350.71 (12.09)
9	Total marketing cost	37.85 (1.72)	127.91 (5.04)	307.01 (10.58)
10	Total marketing margin	-	309.44 (12.19)	587.45 (20.26)
11	Consumers purchase price	2104.85 (100)	2537.35 (100)	2899.46 (100)
12	Producer share in consumer rupee (%)	98.28%	82.76%	68.97%
13	Marketing efficiency (ME) (%)	57.91	19.83	9.44

(Figures in parentheses indicate percentage to consumer's purchase price)

The marketing efficiency estimated by using modified Shepherd's formula, was higher (57.91%) in channel I, than that of (19.83%) in channel II and (9.44%) in channel III. This revealed that, the marketing margins were taken away by the market intermediaries in channel III and channel I resulted in poor efficiency in the marketing of bitter gourd.

CONCLUSIONS

1. Maximum proportion of marketable surplus distributed through channel III (59.33%) which was followed by channel II (28.68%) and channel I (11.98%).
2. The study on marketing cost of bitter gourd indicated that, per quintal cost of marketing was highest (10.58%) in channel III which was followed by (5.04%) in channel II and (1.72%) in channel I. this revealed that, major share of price spread was taken away by intermediaries

which minimized per unit returns to bitter gourd producers.

3. The producer's share in consumer's rupee was highest (98.28%) in channel I which was followed channel II (82.76%) and channel III (68.97%). Further revealed that, involvement of intermediaries has decrease the producer's share in consumer's rupee to considerable extent.
4. The marketing efficiency was highest in channel I (57.91), followed by channel II (19.83) and channel III (9.44). This revealed that, the higher marketing margins taken away by market intermediaries, thus poor efficiency in marketing channel II and channel III.

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