AN ECONOMIC ANALYSIS OF MARKETING COST, PRICE SPREAD AND MARKETING EFFICIENCY OF POTATO IN MIDDLE GUJARAT

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ABSTRACT

This study was undertaken with a view to study pattern and practices in marketing, price spread and marketing efficiency of potato growers of middle Gujarat. A sample of 200 potato growers spread over ten villages of three talukas of Anand and Kheda districts of middle Gujarat was selected for the detailed inquiry by adopting multi-stage sampling technique. For studying price spread in marking of potato 10 market functionaries of each type were chosen from regulated markets of study area. The Producer-Wholesaler-cum-Commission agent-Retailer-Consumer was the major marketing channel as more than 60% of marketed surplus moved through this route. On an average, the total marketing cost incurred by growers amounted to Rs. 29.22 per quintal. The important cost items were cost of transportation, packaging charges and loading and unloading charges of the produce. The average cost of production was Rs 281.84 per quintal. The average price and net return received by farmer was Rs 370.07 and Rs 59.01 per quintal. Large farmers received higher prices due to sell in distant markets. Per quintal cost and margins in potato marketing recorded to Rs. 188.19 (26.28%) and 187.10 (26.12%), respectively. Thus, the producer's share in consumer's rupee was only 47.60%, which was lower due to lack of storage facilities and presence of unorganized markets.

KEYWORDS: Marketing Efficiency, Multi Stage Sampling, Price Spread, Producer's Share, Unorganized Markets

INTRODUCTION

The vegetable crop holds a great promise for accelerating income of the farmers (Joshi, 2011). Potato 'The king of vegetables' is the most important food and commercial crop in India after rice, wheat and maize. Indian vegetable basket is incomplete without potato. Potato is a nutritionally superior vegetable due to its edible energy and edible protein. It is considered to be an important crop to achieve nutritional security of the nation.

Potato is grown more than 100 countries in the world and in world China ranks first, followed by Russia and India. Around 16 per cent of total world production is produced by India. In India Uttar Pradesh, West Bengal, Punjab, Bihar and Gujarat accounted for more than 80 per cent of total production of potato. Gujarat contributes around 5 per cent in India's total potato production (FAO, 2008). The Gujarat state's agro-climactic condition favors its cultivation. In Gujarat major vegetable cultivable zones are Kheda and Anand, contributes 18 per cent of total vegetable area of the state. Potato contributes 21.93 per cent of total vegetable area of middle Gujarat (Anand, Dahod, Kheda, Panchmahal and Vadodara).

In a production-oriented agricultural economy, an efficient agricultural marketing system is a pre-requisite for two reasons – first, for ensuring the farmers the remunerative prices of their products of that they can get an incentive to

produce more and second, for transporting the products from producers to consumers in an economic way (Kumar, 1995). Marketing efficiency is related to the cost involved in moving goods from the producer to the consumer and to the quantity of services offered. A reduction in marketing cost without affecting consumer satisfaction indicates improvement in efficiency. (Kaur *et al*., 2013). Keeping all this in view, the present study entitled **"An Economic Analysis of Marketing Cost, Price Spread and Marketing Efficiency of Potato in Middle Gujarat"** has been designed.

METHODOLOGY

Selection of Sample

For this study, a multi-stage sampling technique was adopted. In the first stage, Kheda and Anand districts were chosen purposively on the basis of their maximum vegetable area and at the subsequent stages, talukas and villages were chosen. Finally, from each selected village, 20 vegetable growers were selected at random. Borsad and Anand talukas of Anand district and Nadiad taluka of Kheda districts were considered for the study. Among 10 villages selected on the basis of highest acreage, 7 villages comprised of Kheda and 3 villages of Anand district. Thus, in all 200 potato growers comprising of 78 marginal, 71 small, 35 medium and 16 large farms were selected for the detailed inquiry. For studying price spread in marketing of potato 10 market functionaries of each type from the feeding regulated market area were chosen at random.

Tools Used

Price Spread: The producer's share, marketing costs and margins of middleman in marketing of potato was worked out by using the formula as given by Acharya and Agarwal (2003).

Producer's Share in Consumer's Rupee

$$P_S = \frac{P_F}{P_C} \times 100$$

Where, P_S = Producer's share in consumer's rupee,

P_F = Price of the produce received by the farmer, and

P_C = Price of the produce paid by the consumer.

Marketing Margins of Middlemen

The absolute and percentage margin of middlemen involved in marketing were estimated as under by employing the following formula-

Absolute margin of ith middleman = $P_{Ri} - (P_{Pi} + C_{mi})$

Percentage margin of ith middleman

$$= \frac{P_{Ri} - (P_{Pi} + C_{mi})}{P_{Ri}} \times 100$$

Where,

P_{Ri} = Sale price of the ith middleman,

P_{Pi} = Purchase price of the ith middleman, and

C_{mi} = Cost incurred on marketing by the ith middleman.

Total Cost of Marketing

The total cost incurred on marketing of potato by the farmers and intermediaries involved in the process of marketing was computed as:

$C = C_F + C_{m1} + C_{m2} + \ldots\ldots\ldots\ldots C_{mn}$

Where,

C = Total cost of marketing

C_F = Cost incurred by the producer in marketing

C_{mi} = Cost incurred by the ith middleman in marketing

Marketing margin for the adopted marketing channel was worked out by comparing the prices prevailing at successive stages of marketing. Since used price were related to a particular point of time and as such concurrent margins were worked out.

Modified Measure of Marketing Efficiency

It was computed by employing the following formula

MME = [RP / (MC + MM)] -1

RP = FP + MC + MM.

Where, MME = Modified measure of marketing efficiency,

RP = Prices paid by the consumer,

MC = Total marketing costs,

MM = Net marketing margins, and

FP = Pieces received by the farmer.

The higher the ratio more will be the marketing efficiency and vice-versa.

RESULTS AND DISCUSSIONS

Majority of the vegetable growers sell their produce in distant markets and as such they have to incur high marketing cost as compared to sale in field at village market.

Marketing Cost Incurred by Potato Growers

The details of component wise per quintal marketing cost incurred by potato growers are presented in Table 1. It is evident from the table that on an average marketing cost incurred by potato growers amounted to Rs. 29.22 per quintal.

Among the various components of marketing cost incurred by the growers, packing cost (including cost of gunny bag) was highest (Rs. 13.07/qtl.), accounting for about 45 per cent to total marketing cost, followed by cost of loading and unloading (22.42%), transportation cost (15.40%) and preparation of product for market (8.62%). Further, the results revealed that per quintal total cost was highest on large farms (Rs. 35.88), followed by on medium farms (Rs. 33.05), small farms (Rs. 28.71) and on marginal farms (Rs. 26.60). Thus, it is inferred that as the size of farm increased the marketing cost also increased. Singh *et al.* (1993) also find the similar result in their study.

Table 1: Marketing Cost Incurred by Potato Growers on the Sample Farms (Rs./Qtl.)

Sr. No.	Particulars	Category of Farms				
		Marginal	**Small**	**Medium**	**Large**	**All Farms**
1.	Preparation for market	2.35 (8.84)	2.65 (9.23)	2.57 (7.78)	2.68 (7.48)	2.52 (8.62)
2.	Loading, unloading cost	6.37 (23.95)	6.73 (23.44)	7.11 (21.51)	5.43 (15.13)	6.55 (22.42)
3.	Packing charges	12.57 (47.26)	12.59 (43.85)	14.20 (42.97)	15.20 (42.36)	13.07 (44.73)
4.	Transporting cost	4.37 (16.42)	4.07 (14.18)	5.90 (17.85)	3.93 (10.95)	4.50 (15.40)
5.	Local tax	0.25 (0.94)	0.18 (0.63)	0.15 (0.45)	0.14 (0.39)	0.20 (0.68)
6.	Other expenses	0.69 (2.59)	2.49 (8.67)	3.12 (9.44)	8.50 (23.69)	2.38 (8.15)
	Total marketing cost	26.60 (100.00)	28.71 (100.00)	33.05 (100.00)	35.88 (100.00)	29.22 (100.00)

Figures in parentheses indicate percentage to total.

Cost of Production, Marketing Cost and Returns

The cost of production, marketing, sale price and net returns from potato are presented in Table 2.

Table 2: Cost of Production, Marketing Cost and Returns From Potato (Rs./Qtl.)

Sr. No.	Farm Size	Total Cost of Production	Marketing Cost	Total Cost*	Sale Price	Net Return
1	Marginal	275.63	26.60	302.22	337.38	35.16
2	Small	294.40	28.71	323.11	349.11	26.00
3	Medium	253.92	33.05	286.97	363.48	76.51
4	Large	292.01	35.88	327.89	406.32	78.43
	Average	281.84	29.22	311.06	370.07	59.01

*Total cost is the sum of cost of production and marketing cost.

The results revealed that per quintal average cost of production of potato was Rs. 281.84. It ranged from Rs. 253.92 per quintal on medium farm size groups to Rs. 294.30 on small size group of potato cultivators. Thus, on an average total cost (cost of production plus cost of marketing) incurred was Rs. 311.06. The average price received by sample potato growers was Rs. 370.07. Among the various categories of vegetable growers, larger farmers received higher price as compared to other farm groups due to sell in distant markets. Further, it was also revealed that on an average net return per quintal of potato growers were Rs. 59.01. Increasing trend was observed on different category of farms when the comparison was made on the basis of net return from potato production.

Price Spread and Marketing Efficiency

The marketing costs, margins and price spread in marketing of potato through major channel have been presented based on the data collected from farmers and market functionaries. The channels identified in the study area were

Channel I: Producer–Village Merchants–Consumers

Channel II: Wholesaler–cum-Commission Agent–Retailer – Consumer (in APMC)

Channel III: Producer–Wholesaler–Retailer–Consumer

On an average about 62, 24 and 14 per cent of total potato moved in studied area through Channel II, III and I, respectively. Moreover, it was found on overall basis negligible per cent of potato was sent for cold storage. Thus, more than 60 per cent of potato moved through producer to wholesaler-cum-commission agent to retailers to consumer. As such, details of cost, margin and price spread were studied for channel II only. The costs incurred and margins earned by various market functionaries as well as price spread and marketing efficiency in marketing of potato through Channel II are given in Table 3.

The total margin earned by different functionaries was Rs. 187.10 per quintal of potato. It was higher at retailers' level (Rs. 147.70 per quintal) compared to wholesaler (Rs. 39.40 per quintal), constituting 20.62% and 5.50% of consumer's price, respectively.

Table 3: Cost, Margin, Price Spread and Marketing Efficiency of Potato (Rs./Qtl.)

Sr.No.	Particulars	Rs./qtl.	%
1	Producer's net price	340.85	47.60
2	Cost incurred by		
	(a) Producers	29.22	4.08
	(b) Wholesaler-cum-commission agent	78.43	10.95
	(c) Retailers	80.54	11.25
	Total	**188.19**	**26.28**
3	Margins of		
	(a) Wholesaler-cum-commission agent	39.40	5.50
	(b) Retailers	147.70	20.62
	Total	**187.10**	**26.12**
4	Price spread (cost + margins)	375.29	52.40
5	Retailer's sale price/ consumer's purchase price	716.14	100.00
6.	Marketing efficiency	0.91	

The marketing cost incurred by different functionaries was Rs. 188.19 per quintal of potato, accounting for 26.28% of the consumers' price. Further, it was observed from the table that producer's share was 47.60% of the price paid by potato consumers.

Table indicates that the price spread (marketing cost + marketing margins) was higher (52.40%) compared to producer's share in consumer's price in the marketing of potato. It can be inferred from the study that the perishable nature of vegetables, lack of proper storage facilities at reasonable charges and unorganized marketing system in the study area resulted into lion's share of retailer's margin and higher proportion of marketing cost.

In case of potato the total marketing cost and marketing margins involved in the selected marketing channel (Channel II) was Rs. 375.29 per quintal. Considering this with producer's net price per quintal, the modified marketing efficiency was lower than unity (0.91). This was due to higher marketing costs and margins incurred by wholesalers and

retailers. Shiyani *et al.* (1998) find similar results in case of vegetables.

CONCLUSIONS

The study showed that the average marketing cost incurred by potato growers amounted to Rs.29.22 per quintal and among them packing cost was highest (Rs.13.07) followed by loading and unloading charges (22.42%) and transportation cost (5.40%). The average cost of production was 281.84 Rs/qtl. The average price received by the farmer was Rs 370.07/qtl, which was higher on large farms due to sell in distant markets. Out of three marketing channels 60% of total wheat produces moved through Producer–wholesaler cum commission agent– Retailer– Consumer (Channel-II). The share of marketing cost and marketing margin was 26.28% and 26.12% of consumer's price was higher as compared to the producer's share in consumer's price was 47.60 per cent due to lack of storage facilities and presence of unorganized markets.

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