

An Economic Analysis of Price Spread, Marketing Efficiency and Marketing Cost of Tomato in Prayagraj District of Uttar Pradesh

Article Type: *Original Research Article*

The study was carried out to analyse the price spread, marketing efficiency and marketing cost of tomato. The Prayagraj district of Uttar Pradesh was selected purposively for the study because of the large amount of tomato production. Due to the perishable nature of tomato the farmers couldn't stock up and had to sale in lean month. So, there wasn't much difference in marketable and marketed surplus of tomato. The percentage of marketable surplus was highest in medium size farm group i.e., 95.28 percent followed by small farmers with 94.94 percent and large size farmers with 94.02 percent. The average marketable surplus was

320.09 quintals that is 94.75 percent. The average total marketing cost was Rs 800/qtls, the average net price received by the farmers was Rs 2000/qtls the average price spread was Rs 800/qtls, and the average Marketing efficiency was Rs 2.5/qtls.

Keywords: Price spread, marketing efficiency, marketing cost, market surplus

Introduction

Peru of South America is the place from which tomato is originated. It is the second important crop of world after potato. Vitamin A, C, potassium and minerals are the richest source present in tomato. It is used as an ingredient in the preparation of soup, juice and ketch up, powder. Bihar, Karnataka, Uttar Pradesh, Orissa, Maharashtra, Andhra Pradesh, Madhya Pradesh and West Bengal are the major tomato producing states in India.

In India Tomato ranks third in priority just after potato and onion but second in the world after potato. In case of production and area of tomato India ranks second in the world. China, USA, Italy, Turkey, India and Egypt are the major tomato growing countries in the world. The total tomato production is 182.43 lakh tons in India (State Directorates of Horticulture 2019). All India expected production of tomato in 2019-20 is estimated to be 186.08 Lakh Tonnes (State Directorates of Horticulture, 2019). As reported by states upto April 2020, Rabi Area sown is 6.055 Lakh Ha. against 5.73 Lakh Ha. last year (State Directorate of Horticulture, 2019). Maximum yield of tomatoes was in Andhra Pradesh, Orissa, Karnataka, Maharashtra, West Bengal, Bihar, Gujarat etc. Throughout the year tomatoes were available for import. High yielding F1 hybrids are being cultivated by growers on a relatively good scale. Allotment of raised seedlings of F1 hybrids is quite prevalent and is getting popular among vegetable growers. APEDA has established a number of Agri Export Zones for vegetables videlicet in Punjab, U.P., Gujarat, Bihar, Jharkhand and West Bengal for promoting exports of vegetables and infrastructure for the same is being/has been set up. (APEDA Database, 2011-12).

Research Methodology

Source of data

The study was conducted in Prayagraj District of Uttar Pradesh was selected purposively because it had large amount of tomato production takes place in Prayagraj. There were 20 Blocks in Prayagraj district out of those present Prayagraj districts Chaka and Karchana has been selected purposively for present study as the selected species i.e. Tomato

is extensively grown in this specific area. The list of 10 villages that comes under selected block was prepared and village namely Baswar, Mohabbatganj, Merauke, Mahewa West and Dandi from Chaka Block and Barawan, Dewari, Kherwa, Numaiya and Bisauna from Karchana Block were selected purposively because these blocks had maximum number of farmers grow Tomato on large number.

From the list of selected tomato growers based on their size of land holdings they were categorised into three groups

1. Marginal farmer (< 1 ha)
2. Small farmer (1-2 ha)
3. Medium farmer (2-10ha)

60 respondents were selected using random sampling technique.

2.1 Primary Data

The primary data was collected by preparing a well-structured schedule. The required data was collected by personal interviews.

2.2 Secondary Data:

The secondary data was taken from the published report at Block, Tehsil and District offices.

3 Period of Enquiry:

The data was collected during the agriculture year 2020-2021.

Analytical Tools Used

Producer's Share in Consumer's Rupee:

1. Marketing cost:

$$M = C_f + C_{m1} + C_{m2} + C_{m3} + \dots + C_{mn}$$

Where,

M = Total cost of marketing

C_f = Cost incurred by the producer (from the produce leaves the farm till the sale of the produce), and

C_{mn} = Cost incurred by the ith middlemen in the process of buying and selling.

2. Marketable surplus

$$MS = P - C$$

Where,

MS = Marketable surplus

P = Total Production

C = total requirements (family and farm)

3. Marketing Margin of Middlemen:

(a) Absolute margin = $PR_i - (P_{pi} + C_{mi})$

(b) Per cent margin =
$$\frac{PR_i - (P_{pi} + C_{mi})}{PR_i} \times 100$$

4. Producer's share in Consumer's Rupee:

$$P = \frac{(C - M) \times 100}{M}$$

Where,

P = Producer's share in Consumer's Rupee

C = Consumers' rupee

M = Marketing cost

5. Price Spread = Total Marketing Cost + Total Marketing Margin

6. Marketing Efficiency (Acharya & Agrawal)

$$\text{Marketing Efficiency} = \frac{\text{Consumer price}}{\text{Total marketing cost} + \text{marketing margin}}$$

Result and Discussion

Table 1 revealed the disposable pattern of tomato shows that Total production of tomato was highest in medium size farms (337.7 quintals) as compared to small size farms (329 quintals) and marginal size farms (307.33 quintals). Home consumption is mostly in small size farms as compared to medium and large size farms. Kind payment instead of wages is highest in large size farms as compared to small and medium size farms. The medium farmers gave highest quantity of produce for religious purpose. The highest percent of produce was retained by medium size farms (17.62 quintals) followed by small (16.75 quintals) and marginal size farms (14.5 quintals) respectively. It was found that the highest percentage of

marketable surplus was for medium size farm group i.e. 95.28 percent followed by the small farm group with 94.94 percent and the large size farmers with 94.02 percent. The average marketable surplus was 320.09 quintals with 94.75 percent.

Table 1 Disposal Pattern of Tomato per hectare in different Size of Farms Group in Prayagraj district (Qtl. /ha)

Particular	Size of farm groups			Sample Average
	Marginal	Small	Medium	
Total yield	307.33	329	337.71	324.68
Home consumption	6.15	7.57	8.10	7.27
Kind payments as wages	0.63	1.34	1.68	1.22
Relatives and religious person	7.7	7.84	7.84	7.79
Total retention	14.5	16.75	17.62	16.29
Marketable surplus	292.83	312.25	320.09	308.39

Table 2 revealed that marketing cost/ha 1st packaging material 184 2nd Packaging charges 73 ,3rd Transportation 350 ,4th Loading Un-loading charges 117 ,5th Weighing charges 76. Total is Rs-800/Qtl. The transportation cost incurred was highest due to increase in petrol and diesel cost. The packaging cost was also high due to unavailability of materials.

Table 2 Marketing Cost/Qtl

S.No.	Particulars	Total Cost (Rs/qtl)
1	Packaging material	184
2	Packaging charges	73
3	Transportation	350
4	Loading Un-loading Charges	117
5	Weighing Charges	76
	Total	800

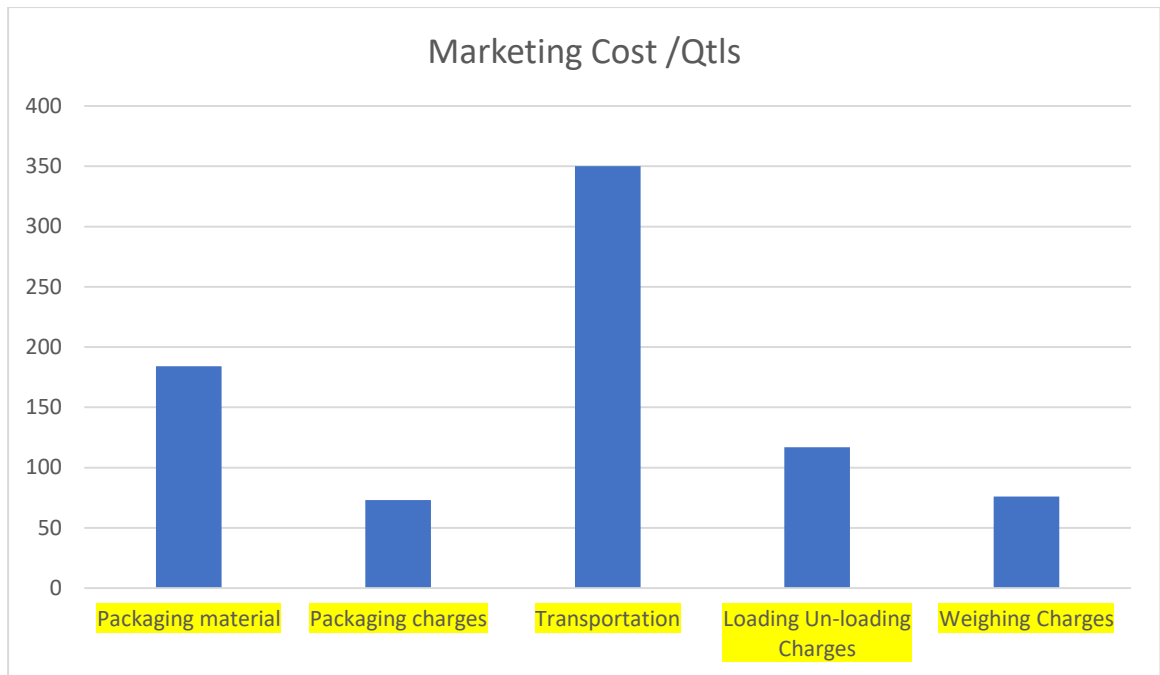


Figure 1 Differences in Marketing cost and qualities

From Table 3 it is observable that the comparison of total marketing cost, total marketing margin, price spread, producer share in consumer rupee and marketing efficiency (Rs/qtls) – 1st Net price received by farmer/qtl – 2000, 2nd Total marketing cost – 800, 3rd Price spread – 800, 4th Marketing efficiency – 2.5. There is a huge gap between the price received by the farmers and the price at which the consumers buy the produce, it's because of all the middleman that comes in during marketing.

Table 3: Comparison between the total marketing cost, total marketing margin, price spread, producer share in consumer rupee (%) and marketing efficiency (Rs/qtls)

S.No	Particulars	(Rs/qtls)
1	Net price received by farmer/qtl	2000
2	Total marketing cost	800
3	Price spread	800
4	Marketing efficiency	2.5

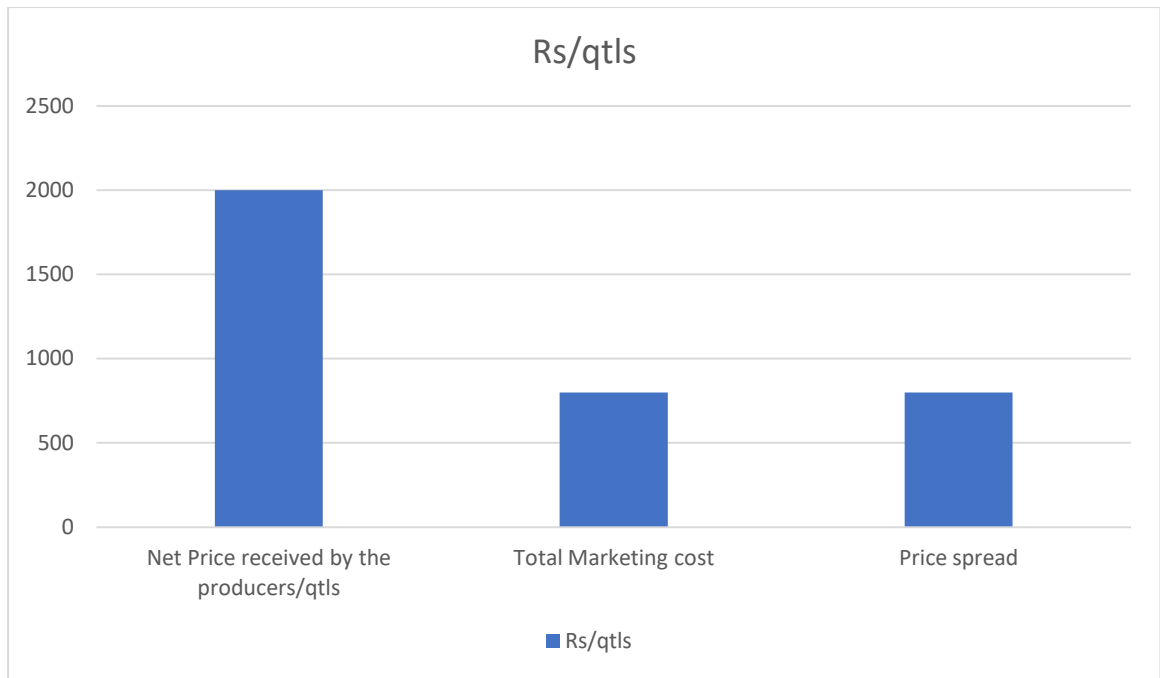


Fig 2: Comparison between the total marketing cost, total marketing margin, price spread, producer share in consumer rupee (%)

CONCLUSION

The study reveals that the disposable pattern of tomato showed that the medium size farmers (337.7 quintals) had highest total production of tomato as compared to small size farmers (329 quintals) and then comes the marginal size farmers (307.33 quintals). Home consumption was found to be highest in small size farmers as compared to medium and large size farms. Large size farmers were first in kind payment as compared to small and medium size farms. Medium sized farmers were leading in giving wages has kind payments. The medium size farmers (17.62 quintals) retained the highest percent of produce followed by small (16.75 quintals) and marginal size farms (14.5 quintals) respectively. It was also found that the highest percentage of marketable surplus was found in medium size farm group i.e., 95.28 percent followed by small farm group with 94.94 percent and large size farm group with 94.02 percent. The sample average marketable surplus was 320.09 quintals with 94.75 percent.

The comparison between the total marketing cost, total marketing margin, price spread, producer share in consumer rupee and marketing efficiency (Rs/qtls) – 1st Net price received by the producers/qtls – 2000, 2nd Total marketing cost – 800, 3rd Price spread – 800, 4th Marketing efficiency – 2.5.

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