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Marketing Margin, Price Spread and Marketing Efficiency Analysis on Different Poultry Farms

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A B S T R A C T

A study was conducted to analyze the marketing pattern of poultry layer farms in Namakkal district of Tamil Nadu state, both primary and secondary data were used. The primary data pertained to the year 2018-19 and was elicited from 100 poultry farms and 20 market intermediaries selected and data collected using pre-tested questionnaires. Tabular, financial analysis, on marketing pattern and efficiency technique were employed. The present study revealed that the producer's share in consumer's rupee was 90.00 per cent, the remaining 4.30 per cent accounting for the different costs and 5.70 per cent formed for the wholesaler's margin on channel-I. While on channel-II, the price paid by consumer for eggs sold through this channel was as high as Rs. 4400 per 1000 eggs. The price spread amounted to Rs. 900 per 1000 eggs because both wholesalers and retailers incurred marketing costs and therefore, comparatively the producer's share in the consumer's rupee was reduced to 80.00 per cent, respectively. Hence, the producer's share in consumer's rupee was 92.00 per cent, the remaining 3.40 per cent accounting for the different costs and 4.30 per cent formed for the retailer's margin, respectively.

Introduction

Presently India exports table eggs and hatching eggs to middle-east to cater to NRI population. India is exporting egg powder, frozen egg yolk and albumen powder to Europe, Japan and other countries. Poultry exports are mostly to Maldives and Oman. Indian poultry meat products have good market in Japan, Malaysia, Indonesia and Singapore. Lack of infrastructure facilities such as poultry disease diagnostic laboratories, feed analytical laboratories, meat testing laboratories, processing, packaging of broilers including developing cold chain for storage and transportation at airports and sea-ports and speedily handling of cargo etc are major constraints affecting badly the Indian exports. Brand building is yet another area which is not only expensive but also time consuming. The cost of export is also alarming compared to developed countries. The high incidence of customs and excise duties, absence of incentives for exports and

levy of Income Tax on poultry are other major inhibiting factors hurdling the export growth of India (IPED, 2019).

Presently India exports table eggs and hatching eggs to middle-east to cater to NRI population. India is exporting egg powder, frozen egg yolk and albumen powder to Europe, Japan and other countries. Poultry exports are mostly to Maldives and Oman. Indian poultry meat products have good market in Japan, Malaysia, Indonesia and Singapore. Lack of infrastructure facilities such as poultry disease diagnostic laboratories, feed analytical laboratories, meat testing laboratories, processing, packaging of broilers including developing cold chain for storage and transportation at airports and sea-ports and speedily handling of cargo etc are major constraints affecting badly the Indian exports. Brand building is yet another area which is not only expensive but also time consuming. The cost of export is also alarming compared to developed countries. The high incidence of customs and excise duties, absence of incentives for exports and levy of Income Tax on poultry are other major inhibiting factors hurdling the export growth of India (Sharma *et al.,* 1999).

Poultry sector in India is valued at about Rs. 80,000 crore (2015-16) broadly divided into two sub-sectors - one with a highly organized commercial sector with about 80.00 per cent of the total market share (say, Rs. 64,000 crore) and the other being unorganized with about 20.00 per cent of the total market share of Rs. 16,000 Crore. The unorganized sector also referred to as backyard poultry plays a key role in supplementary income generation and family nutrition to the poorest of the poor. It is estimated that with a poultry population of 729 million [30.00 per cent layers at around 215 million and 40.00 per cent broilers at around 480 million] small and medium farmers are mostly engaged in contract farming system under larger integrators and there are around 30 million farmers engaged in backyard poultry as per 19th Livestock Census (Anon., 2019).

There are few segments poultry industry, comprising layers, broilers and others. In the egg production layers are kept in cages during their production cycle of 72 weeks. Once their productivity declines, they are sold in the market for consumption. Income from layer farm poultry products includes sale of eggs, cull birds, gunny bags and manure. India is marching ahead towards attaining nutritional security for its people. In this context, poultry eggs, which is highly nutritious and the cheapest source of high quality protein and the poultry meat that is comparatively less expensive than that of red meat (Anon., 2011).

Materials and Methods

Table 1 reveals that the Namakkal and tiruchengode taluks were purposively selected as these have relatively large number of poultry (layer) farms as compared to other taluks of the district. A list of poultry farms located in each of the selected taluks in Namakkal district was prepared with the help of the staff of the department of animal husbandry. From the list 100 layer farms are selected out of which 25 farms are selected from four blocks or village divisions, the blocks include Namakkal, ernapuram, elachipalayam, mallasamathuram, out of this four blocks Namakkal and ernapuram comes under Namakkal taluk whereas elachipalayam and mallasamuthram comes under tiruchengode taluk. The farms are selected based on multistage random and purposive sampling technique. After collection of data the selected farms are classified in to three groups as small, medium, large based on the number of poultry birds using the mean plus or minus standard deviation formula. The

birds size less than 11,200 comes under small which included 10 farms, the birds size from 11,200 to 87000 comes under medium farms which included 69 farms and the bird size of above 87000 is taken as large farms which include 21 farms, all the 100 layer farms are selected in the study area are done without looking in to the population. For the purpose of analyzing the marketing aspects of eggs, 10 wholesalers and 10 retail egg centres were selected randomly. Simple statistical tools like averages and percentages were used in to arrive at meaningful results. Similar findings were find out by Aruputharaj and Devi (1979) (Table 2).

Price variation on different marketing channels of poultry farm

Marketing cost was calculated by estimating the cost incurred in the process of marketing of poultry selling. The cost incurred after product ready for selling till it reaches to the consumers hand generally constitutes the marketing cost. It includes transportation cost, handling cost, storage cost, market fees, weighing charges and labour charges for packing, loading and unloading. The marketing cost at various stages of marketing was calculated and finally the total marketing costs have been computed (adopted from the Choudhary *et al.,* 2017).

The Marketing margin at any stages of marketing has been calculated as follows:

$MM_i=SP_i-(PP_i+MC_i)$ …… (1)

Whereas:

MM_i = Marketing margin of the i-th middleman,
SP_i = Selling price of the i-th middleman,
PP_i = Purchasing price of the i-th middleman,
MC_i = Marketing cost incurred by the i-th middleman

Price spread is the difference between the price paid by the consumer and the price received by the producer. It mainly consists of marketing costs and margins. The price spread analysis was carried out as follows:

$$\text{Producer's share in consumer's rupee} = \frac{\text{Producer's price}}{\text{Consumer's price}} x100 \quad \ldots\ldots (2)$$

Similarly, the share of total marketing costs and the total marketing margins have also been estimated to analyze the price spread (Sharma *et al.,* 2000).

Price spread

It was worked out by computing the difference between the sale prices of retailers to consumer and net price received by the producer, as follows (Vengoto and Sharma (2018):

Price spread = Pr – Pg …… (3)
Whereas:
Pr = Price paid by consumer
Pg = Price received by the growers

Marketing efficiency

The marketing efficiency was calculated by conventional method was used to compute marketing efficiency (Sharma *et al.,* 2000).

ME =

(Net Price received by the producer - Consumer's price)
---------- (4)
Total Marketing cost

Results and Discussion

For the present study the price spread in marketing of eggs at Namakkal district was

covered through three marketing channels, as follows:

Channel-I: Producer-wholesalers-consumers

Table 3 reveals the analysis of the producer's share of in consumer's price was found to be 90.00 per cent. The costs incurred by wholesalers on egg centre accounted for 0.27 per cent of the consumer's price (Rs. 11 per 1000 eggs), transportation charges formed 2.25 per cent (Rs. 90), labour charges formed Rs. 0.90 per cent (Rs. 36) and the value of breakage of eggs accounted to 0.90 per cent of the consumers price (Rs. 35), respectively. The wholesaler's margin was Rs. 228 per 1000 eggs (5.70 per cent of the consumer's price), hence, the producer's share in consumer's rupee was 90.00 per cent, the remaining 4.30 per cent accounting for the different costs and 5.70 per cent formed for the wholesaler's margin. The price spread and marketing efficiency in this channel was Rs. 400 and 2.30 for 1000 eggs, respectively. Similar findings were in the line of Kent and Sharma (2014).

Channel-II: Producer-Wholesalers-Retailers-Consumers

Table 4 reveals the marketing costs and margins for this channel for the wholesalers sold the eggs through retailers to the consumer. The wholesalers transported the eggs from the producers to other place and sold them to the retailers in there after keeping a margin of Rs. 306 per 1000 eggs (7.00 per cent of consumer's price). The major costs incurred by the wholesalers were, transportation charges (2.40 per cent), labour charges (1.20 per cent) and the value of breakage of eggs (0.80 per cent), respectively. While the wholesaler's sale price or retailers purchase price was Rs. 4000 per 1000 eggs (which formed (80.00 per cent of the consumer's purchase price). The retailers incurred various costs like transportation (1.10 per cent), labour charges (0.80 per cent) and the value of breakage of eggs (0.80 per cent), respectively. Similar findings were in the line of Sharma (2015).

The retailer's margin was Rs. 272 per 1000 eggs accounting for 6.20 per cent of the consumer's purchase price. The price paid by consumer for eggs sold through this channel was as high as Rs. 4400 per 1000 eggs. The price spread amounted to Rs. 900 per 1000 eggs because both wholesalers and retailers incurred marketing costs and therefore, comparatively the producer's share in the consumer's rupee was reduced to 80 per cent. The marketing efficiency in this channel was 1.80, respectively. Similar findings were in the line of (Sharma *et al.*, 2002).

Channel-III: Producer-Retailers-Consumers

Table 5 reveals the marketing costs and margins for this channel for the retailers took care of collecting the eggs from the producer unit and, also transporting to their shop. On the other hand, the consumers paid Rs. 3900 per 1000 eggs which formed the consumer's price. The total costs incurred by the retailers consist of the transportation charges, labour charges and the value of breakage of eggs.

The transportation cost accounted for Rs. 134 (3.40 per cent of consumer's price), labour charges formed Rs.36 (0.90 per cent) and the value of breakage of eggs was Rs. 35 (0.90 per cent), cost for the egg centre formed Rs.13 (0.30 per cent). Retailer's margin was Rs. 166 per 1000 eggs (4.30 per cent of the consumer's price). Hence, the producer's share in consumer's rupee was 92.00 per cent, the remaining 3.40 per cent accounting for the different costs and 4.30 per cent formed for the retailer's margin. The price spread and

marketing efficiency in this channel was Rs. 300 and 2.20 for 1000 eggs, respectively. Similar findings were in the line of Paney and Sharma (2018).

Table.1 Taluk wise total poultry population, total number of farms

S. No.	Name of the Taluk's	Number of farms	Number of birds
1.	Namakkal	499	24379800
2.	Rasipuram	130	6372800
3.	Paramathivelur	35	1875500
4.	Tiruchengode	168	59744500
5.	Sendhamangalam	30	2027500
6.	Kohill hills	0	0
7.	Komarapalayam	3	185000
Total		865	40815050

(Source: District Animal Husbandry Office, Namakkal, 2017-2018)

Table.2 Number of sample layer farms selected

S. No.	Taluks	Village divisions	Number of farms
1.	NAMAKKAL	Ernapuram	25 (25.00)
		Namakkal	25 (25.00)
2.	TIRUCHENGODE	Elachipalayam	25 (25.00)
		mallasamutharam	25 (25.00)
Total			100 (100.00)

(Source: field study)

Table.3 Marketing margin, price spread and marketing efficiency of channel-I

S. No.	Particulars	Amount (Rs/1000 eggs)	percentage share in consumers price
1.	Net Price received by Producer / Wholesalers Purchase Price	3600.00	90.00
2.	Cost incurred by Wholesaler		
a.	Labour Cost	36.00	0.90
b.	Transportation	90.00	2.30
c.	Breakage	35.00	0.90
d.	Cost for Egg Centre	11.00	0.30
e.	Total Marketing Cost incurred by Wholesaler	172.00	4.30
3.	Wholesaler Margin	228.00	5.70
4.	Wholesale Sale Price	4000.00	100.00
5.	Producer Share in Consumers Rupee (%)		90.00
6.	Price Spread	400.00	
7.	Marketing Efficiency (Ratio)	2.30	

Table.4 Marketing margin, price spread and marketing efficiency for channel-II

S. No.	Particulars	Amount (Rs per 1000 egg)	Percentage share in consumers price
1.	Net Price received by Producer / Wholesalers Purchase Price	3500.00	80.00
2.	Cost incurred by Wholesaler		
a.	Labour Cost	54.00	1.20
b.	Transportation	105.00	2.40
c.	Breakage	35.00	0.80
d.	Total Marketing Cost incurred by Wholesaler	194.00	4.40
3.	Wholesaler Margin	306.00	7.00
4.	Wholesale Sale Price / Retailers Purchase Price	4000.00	91.00
5.	Cost incurred by Retailer		
a.	Labour Cost	36.00	0.80
b.	Transportation	47.00	1.10
c.	Breakage	35.00	0.80
d.	Cost for Egg Centre	10.00	0.20
e.	Cost incurred by Retailer	128.00	2.90
6.	Retailers Margin	272.00	6.20
7.	Retailers Sale Price / Consumers Purchase Price	4400.00	100.00
8.	Total Marketing Cost	322.00	
9.	Total Marketing Margin	578.00	
10.	Producer Share in Consumers Rupee (%)	80.00	
11.	Price Spread	900.00	
12.	Marketing Efficiency (Ratio)	1.80	

Table.5 Marketing margin, price spread and marketing efficiency for channel-III

S. No.	Particulars	Amount (Rs /1000 eggs)	Percentage share in Consumers Price
1.	Net Price received by Producer / Retailers Purchase Price	3600.00	92.00
2.	Cost incurred by Retailer		
a.	Labour Cost	36.00	0.90
b.	Transportation	50.00	1.30
c.	Breakage	35.00	0.90
d.	Cost for Egg Centre	13.00	0.30
e.	Total Marketing Cost incurred by Retailer	134.00	3.40
3.	Retailer Margin	166.00	4.30
4.	Retailer Sale Price	3900.00	100.00
5.	Producer Share in Consumers Rupee (%)	92.00	
6.	Price Spread	300.00	
7.	Marketing Efficiency (Ratio)	2.20	

In conclusion, as poultry is one of the important components of animal husbandry activities. It provides additional income and employment opportunities to a large number of people. Poultry production in India has made a huge progress. Poultry enterprise has been one of the important means to alleviate poverty, reduce malnutrition and unemployment among both rural and urban people. In channel-I, Wholesaler's margin was Rs. 228 per 1000 eggs (5.70 per cent of the consumer's price).

The price spread and marketing efficiency in this channel was Rs. 400 and 2.30 for 1000 eggs. In channel-II, wholesaler margin was Rs. 306 per 1000 eggs (7.00 per cent of consumer's price), while the retailer's margin was Rs. 272 per 1000 eggs accounting for 6.20 per cent of the consumer's purchase price. The marketing efficiency was 1.80, while in channel-III, Retailer's margin was Rs. 166 per 1000 eggs (4.30 per cent of the consumer's price). Hence, the price spread and marketing efficiency in this channel was Rs. 300 and 2.2 for 1000 eggs, respectively.

Policy Implications

Based on the findings of the present investigation following policy implications are drawn:

To improve the marketing efficiency, the producer should sell their produce directly to the wholesalers or having a marketing contract with the retailers.

There is a need to strengthen activities by government in holding the farmers from leaving the layer farming.

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