IJCBM International Journal of Commerce and Business Management
Volume 7 | Issue 1 | April, 2014 | 186-190
A CASE STUDY

Marketing efficiency analysis : A case of broiler marketing in Anand district of Gujarat

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Received : *06.09.2013;* **Accepted :** *27.03.2014*

ABSTRACT

The paper aims to analyse the Marketing cost, margin, price spread and efficiency of existing channels in Broiler marketing in Anand district of Gujarat. Using different approaches *viz.*, conventional, Shepherd, Acharya and Composite Index Method, all the channels are analysed for Marketing efficiency. Primary data are collected from 30 commercial broiler growers of Anand district along with 5 traders and 10 retailers with the help of well-structured interview schedules. Four channels exist in the study area. These are Grower → Trader-I → Retailer → Consumer; Grower → Trader-I → Trader-II → Retailer → Consumer; Grower → Trader-I → Consumer (Hotels, institutions, Canteens); and Grower → Retailer → Consumer. Though the channel comprising Grower-Trader-Consumer is most efficient, its share is very less out of the total volume of broiler marketed because of fixed demand by limited number of consumers in this channel. The result shows that the channel involving Broiler Grower-Trader-Retailer-Consumer is most prominent and has higher marketing efficiency in most of the approaches for determining the marketing efficiency.

KEY WORDS : Broiler marketing, Marketing efficiency, Price spread

How to cite this paper : Kumar, Sanjiv (2014). Marketing efficiency analysis : A case of broiler marketing in Anand district of Gujarat. *Internat. J. Com. & Bus. Manage*, **7**(1) : 186-190.

Poultry industry in India has been growing at annual varying rates of 8-15 per cent. It is worth noting that the annual growth rate of the two leading states *viz.*, Tamil Nadu and Andhra Pradesh has declined sharply in the last 5 years (Kumar, 2012). The main underlying reason to this phenomenon seems to be avian influenza. Contrastingly, the state of Gujarat has shown tremendous growth rate of 15.8 per cent during the same period (Kumar, 2012). This could be attributed to significant rise in number of commercial farms, with large number of farms coming in and around Anand district which accounts for 34.3 per cent of total poultry population in the state. Total 132 commercial poultry farms are operational by the time of data collection in Anand district. The three districts namely, Anand, Bhavnagar and Valsad jointly account for more than 50 per cent of total state poultry population.

Efficient marketing plays an important role in increasing the producer's share in consumer's rupee, which in turn helps in increasing the production. Marketing of broiler is costly involving intermediaries' margin, wastage, high transportation and labour costs. In view of the stunning growth of poultry industry with focus on commercial farms in the state in general and in Anand district in particular, this study was taken up with specific objective to analyze the price spread and distribution channels in the current market and computing the marketing efficiency of different market channels that exist in the broiler marketing.

Gangwar *et al*. (2010) conducted a study on the broiler' supply value chain in National Capital Region Delhi: A case study of Ghazipur poultry market and compared the marketing of broiler in Delhi in organized and organized market. The study found that most prominent channel was Producer- Commission agent- Supplier- Distributor- Hotels/Retailers- Consumer. Marketing cost in organized

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market was marginally higher than unorganized market, but the price spread was more than twice that of unorganized.

Kumar *et al*. (2004) conducted a study on economics of production and marketing of vegetables in Andaman and Nicobar Islands and estimated the marketing cost and margin of middlemen for vegetables at different levels *i.e.*, wholesalers and retailers level and it was found that marketing cost was highest for cabbage, followed by tomato. Underlying reason for high marketing cost was the transportation cost due to high distance between production and consumption points.

Sharma and Tungoe (2011) studied on the price spread and marketing efficiency in marketing of potato in Wokha district of Nagaland and it was found that the channel comprising of direct selling to consumers was the most effective channel with highest producer's share in consumer's rupee and concluded that producer's share in consumer's rupee decreased with increase in market intermediary.

METHODOLOGY

The study was conducted to understand the nature of the marketing channels, marketing costs, margins, price spread and producer's share in the consumers' rupee in case of broiler. The area of study was Anand district of Gujarat. The data related to the period of January- March 2012 and for the purpose, 30 independent or non-contract commercial poultry growers. In addition, data were also collected from other market functionaries *viz.*, 5 traders, 10 retailers through personal interviews using well-structured schedules.

The tabular method and percentage analysis were carried out to examine the marketing costs, marketing margin and price spread.

Marketing cost was calculated by summing up the costs of transportation, labour, overhead cost, loss due to mortality and shrinkage and other miscellaneous expenses per kg of live bird by a market functionary (Acharya and Agarwal, 2007).

Marketing margin was calculated by subtracting the sum of purchase price and marketing cost from the selling price per kg of live bird by a market functionary (Acharya and Agarwal, 2007).

Price spread was calculated by the subtracting the grower's net selling price from the consumer's purchase price (Acharya and Agarwal, 2007).

The marketing efficiency was estimated by using the following approaches:

Ratio of output to input (conventional method):

Under this method, efficiency was calculated as the ratio of output *i.e.* value added to input *i.e*. marketing cost incurred in delivering the product to the consumer.

$$\text{Marketing efficiency} = \frac{\text{Consumer purchase price} - \text{Grower selling price}}{\text{Total marketing cost}}$$

Shepherd approach (Shepherd, 1965):

Shepherd suggested that the ratio of the total value of goods marketed to the marketing cost may be used as a measure of marketing efficiency.

$$\text{Marketing efficiency} = \frac{\text{Consumer's purchase price}}{\text{Total marketing cost}}$$

Acharya approach (Acharya and Agarwal, 2007):

According to Acharya, an ideal measure of marketing efficiency can be calculated by using the formula:

$$\text{Marketing efficiency} = \frac{\text{Net selling price of grower}}{\text{Total marketing cost} + \text{Total marketing margin}}$$

Composite index method (Ramakumar, 2001):

In this method marketing efficiency in alternate marketing channels was computed by ranking different performance indicators. The indicators included were producer's share in consumer's rupee, marketing cost of intermediaries, and marketing margins of intermediaries and returns per rupee of investment. Ranks were attached to each performance indicator. By pooling all the indicators, the marketing efficiency was calculated:

$$R = R_i / N_i$$

where,

R_i= Sum of ranks in each channel

N_i = Number of performance indicators.

The channel with the lowest composite index was the most efficient channel.

ANALYSIS AND DISCUSSION

The findings of the present study as well as relevant discussion have been presented under following heads :

Marketing channels:

In the study area, following marketing channels were identified. Trader-I were the traders of Anand city as well as of outside Anand city who directly lift the birds from the farm. Trader-II basicallyoperates in other cities in and outside Gujarat, who contact the trader-I when they don't get the supply from their existing sources (Table 1). These traders used to trade ranging from 1000 to 10000 birds daily. This channel existed occasionally. Consumer in case of Channel III comprised of hotels, army canteens, factory canteens and other institutions. These have annual contract with the trader

for the supply of birds at a fixed price. Retailers daily deal with birds ranging from 30 to 150 daily with weighted average of 57 birds daily. Normally due to more demand on weekend, the sale even goes up to 150 birds for some retailers.

- Channel-I: Grower → Trader-I → Retailer → Consumer
- Channel-II:Grower → Trader-I → Trader-II → Retailer → Consumer
- Channel-III:Grower → Trader-I → Consumer (Hotels, institutions, Canteens)
- Channel-IV:Grower → Retailer → Consumer.

Percentage of live birds sold to different intermediaries at farm:

The growers preferred to sell the birds mostly to the traders with more than 97 per cent of the total live birds from the sample broiler growers being sold to them (Table 1). The traders used to lift the birds from the farm itself. They have their own vehicles for transporting the birds. The poultry growers preferred to sell the birds to the traders as the traders normally make payment within 1-3 days. Additionally, selling to traders assures the farmers or getting their birds lifted at the optimum time. The growers were quite aware that if the birds don't get lifted in one and half months (42 days), the feed conversion ratio (ratio of quantity of feed bird eats to gain in body weight) of birds increases, thereby increasing the cost of production. Only those retailers who were very close to the growers lifted the bird from the farm with arranging for transportation by themselves, and this is very low as compared to the total volume of birds sold.

Table 1: Channels for sale of live birds bysample broiler growers

Market intermediary	Percentage of total live birds sold
Trader-I	97.64%
Retailer	2.36 %

Price spread:

The wholesale market rate of the broilers is declared every day at 4 pm and all the commercial poultry growers (100%) have subscribed to the SMS facility of getting the price in their personal mobile phones. The traders purchase the birds from the farmers at the declared price.

The birds are being sold live to the traders and from traders to the retailers. But retailers sell the dressed birds to the consumers, pricing of which is on the basis of dressed weight. So, the calculations are made after converting the dressed weight into corresponding live weight assuming the dressing percentage of broiler as 65 per cent. It means one broiler which attains marketable age of 2 kg after 42 days yields 1.3 kg of dressed chicken.

Producers don't incur any marketing cost as the birds are lifted from the farm by the traders and in very few cases by the retailers. Traders marketing cost includes cost on labour, transportation including loading of birds from growers farm and unloading, rent, electricity, phone expenses etc. For retailers, marketing cost includes the labour (dresser/cutter) charges apart from the overhead expenses (Table 2).

Table 2 : Marketing costs and margins for different marketing channels

(Price and cost in` per kg live bird)

Particulars	Channel I	Channel II	Channel III	Channel IV
Grower's gross selling price	69	69	69	69
Marketing cost of growers	00	00	00	00
Grower's net selling price	69	69	69	69
Purchase price of the trader-I	69	69	69	
Marketing cost of trader-I	1.1	00	3.7	
Marketing margin of trader-I	0.9	00	1.56	
Selling price of trader-I	71	69	74.26	
Purchase price of trader-II		69		
Marketing cost of trader-II		2.1		
Marketing margin of trader-II		0.9		
Selling price of trader-II				
Purchase price of the retailer	71	72		69
Marketing cost of retailer	13.46	14.34		14.36
Marketing margin of retailer	6.44	7.81		7.54
Selling price of retailer	90.90	94.15		90.90
Consumer's purchase price	90.90	94.15	74.26	90.90

Total marketing cost in channel-III was very less as the consumer is the institutional buyer which enters into contract with the traders for supply of the live birds which is fixed and dressing of which is done by the buyer. As the value addition by the intermediaries was less in this case, price spread was low. Channel IV followed direct linkage between grower and retailer thus reducing the total marketing cost. Net margin in channel-III was least whereas in other channels, it was around ‘ 8-9 per kg of live bird.

As far as the price spread is concerned, channel-II

Table 3: Price spread for different marketing channels

(Price and cost in ` per kg live bird)

Particulars	Channel I	Channel II	Channel III	Channel IV
Consumer’s purchase price	90.90 (100)	94.15 (100)	74.26 (100)	90.90 (100)
Total marketing cost	14.56 (16.02)	16.44 (17.46)	3.70 (4.98)	14.36 (15.80)
Total net margins of intermediaries	7.34 (8.08)	8.71 (9.25)	1.56 (2.10)	7.54 (8.30)
Net price received by the farmers	69.0 (75.90)	69.0 (73.29)	69.0 (92.92)	69.0 (75.90)
Price spread /total value added	21.9	25.15	5.26	21.9

*Figures in parentheses are in percentages

Table 4: Marketing efficiency using conventional method

Particulars	Channel I	Channel II	Channel III	Channel IV
Consumer’s purchase price	90.90	94.15	74.26	90.90
Net price received by the farmers	69.0	69.0	69.0	69.0
Total marketing cost	14.56	16.44	3.70	14.36
Marketing efficiency	1.5	1.53	1.42	1.53

Table 5: Marketing efficiency using shepherd approach

Particulars	Channel I	Channel II	Channel III	Channel IV
Consumer’s purchase price	90.90	94.15	74.26	90.90
Total marketing cost	14.56	16.44	3.70	14.36
Marketing efficiency	6.24	5.7	20.07	6.33

Table 6: Marketing efficiency using Acharya approach

Particulars	Channel I	Channel II	Channel III	Channel IV
Net price received by the grower	69.0	69.0	69.0	69.0
Total marketing cost	14.56	16.44	3.70	14.36
Total net margins of intermediaries	7.34	8.71	1.56	7.54
Marketing efficiency	3.15	2.74	13.12	3.15

Table 7: Marketing efficiency using composite index method

Particulars	Channel I	Channel II	Channel III	Channel IV
Producer’s share in consumer’s rupee (%)	75.90	73.29	92.92	75.90
Rank	2	4	1	2
Total marketing cost (%)	16.02	17.46	4.98	15.80
Rank	3	4	1	2
Total net margins of intermediaries (%)	8.08	9.25	2.10	8.30
Rank	2	4	1	3
Rate of return (Marketing margin/marketing cost)	0.50	0.53	0.42	0.53
Rank	2	3	1	3
Total score	9	15	4	10
Mean score	2.25	3.75	1	2.5
Rank	II	IV	I	III

has highest price spread, it means the producer's share in consumer's rupee was least in this channel as comparedto the other existing channels which was not desirable (Table 3).

Measurement of marketing efficiency:

The marketing efficiency of all the existing channels was calculated which is as follows:

Ratio of output to input (conventional method):

The conventional method which is considered as the price spread and the total marketing cost in delivering the product to the final consumer, showed that Channel-II and Channel-IV as most efficient with index value of 1.53 followed by Channel-I and channel-III as least efficient. It is due to the fact that value addition in channel-III was less as compared to other channels (Table 4).

Shepherd approach:

Table 5 shows that the marketing efficiency of channel-III under Shepherd approach was greater than other existing channels. Channel-II was least efficient. As this approach takes into account the consumer's purchase price on which the marketing efficiency was directly proportional, less consumer price in channel-III made it more efficient. But as it should be kept in mind that the consumer in channel-III purchases the live bird, whereas in other channels, it is the dressed chicken which is purchased by the consumer.

Acharya approach:

Acharya's approach, which is considered as the grower's selling price apart from the marketing costs and marketing margins, showed that Channel-III as the most efficient. Among the other three channels, Channel-I and Channel-IV were equally efficient (Table 6).

Composite index method:

Channel with least mean score is considered to be most efficient and in Table 7, Channels-III was having minimum score which showed that the marketing efficiency of Channel-III was higher followed by Channel-I and Channel-IV.

Conclusion and recommendation:

The study revealed that four channels existed in the Anand market for commercial broiler farmers. In most approaches for computing the marketing efficiency, Channel-III comprising of Grower-Trader-Consumer had higher efficiency. But as its presence in the market is limited, and the buyer in this channel is not purchasing the broiler with same level of value addition as in other channels, its comparison with other channels may not be fair. Among the other channels, Channel-I and Channel-IV were coming out to be relatively better in terms of marketing efficiency. Again, Channel-IV comprising of direct selling of broiler by the broiler grower to the retailer was minimal. Channel-I was the most prominent and efficient channel comprising of Grower-Trader-Retailer-Consumer under the existing marketing situation. The growers should add value at their level, which could be on individual basis or in group/cooperative and try to minimize the intermediaries which will reduce the price spread and increase the marketing efficiency.

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