Efficiency Analysis of Vegetable Under Different Supply Chains in West Bengal

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ABSTRACT *There has been concern in recent years regarding the efficiency of marketing of vegetables, leading to high and fluctuating consumer price and only a small share of consumer rupee reaching to the farmer. Marketing of fruits and vegetables is complex because of perishability, seasonality and bulkiness. Low efficiency of Marketing channels and presence of exploitative middle man are believed to be the cause for fluctuating prices. Marketing efficiency is essentially the degree of market performance. Broadly, one may look at efficiency of a market structure as to whether it fulfills the objectives assigned to it at minimum possible cost or maximizes the fulfillment of objectives with a given level of resource. Thus, it is an important objective to assessing the marketing efficiency of vegetable supply chains.*

1.1 Introduction

Horticultural crops assume a unique role in India's economy by improving the income of the rural households. Vegetable are rich source of vitamins, minerals, proteins, carbohydrates etc. and referred as proactive foods and contribute to the national security of the people. Agricultural marketing, essentially being a sub-set of the overall marketing system, refers to all the activities, agencies and policies involved in the procurement of farm inputs by the farmers and the movement of agricultural produce from the farm to the consumers. An efficient marketing system minimizes the costs and maximizes the benefits to all stakeholders in the supply chain and all the sections of the society. An ideal agricultural marketing system should ensure remunerative prices to the producers, uninterrupted supply of goods at cheaper prices to the consumers and the accumulation of surplus for further development (Hegde and Madhuri, 2013).

1.2 Review of literature

Existing supply chains are long and are dominated by the number of intermediaries like assemblers, wholesalers, sub-wholesalers, commission agent and retailers. In case of fruits and vegetables farmers received one third to the one half of the final price (Gandhi and Namboodiri, 2002). Most of the small and marginal farmers leases out their orchards to pre-harvest contractors. The pre harvest contractor who did not make any fixed investment on the orchards also got more than the producers share (Subrahmanyam, 2002). The farmer of tomato, cabbage, cauliflower and cucumber received less than 50 percent price paid by the consumer. The share of the producer includes the marketing cost (Singh, 2007). The increasing share of high value commodities in the consumption basket of households, higher incomes and urbanization, changing lifestyles, market integration and trade liberalization at global level have led to an increase in the demand for horticulture products in India(Mittal, 2007). Food retailing in India is by and large unorganized, highly fragment and predominantly small and family owned business. As unorganized retail outlets, they are not able to cater to the customer demand for value added services (Singh 2007). Organised retailing takes place under different formats. Globally, there are six retail chain formats, viz. hyper markets, super markets, super centres, warehouse clubs, discount stores, convenience stores and pop and mom stores (chengappa, 2005)

Objectives

1. To analyze the share of farmers and different intermediaries in consumers rupee under different supply chains
2. To analyze the marketing efficiency of cabbage under different supply chains

Research Methodology

The method of data collection was done by the way of survey. The primary data was collected in the form of structured questionnaires. The data were collected from 24-Pargana and Kolkata of west Bengal. The marketing efficiency was calculated with the help of Acharya's Method.

2.1 Analysis of the study

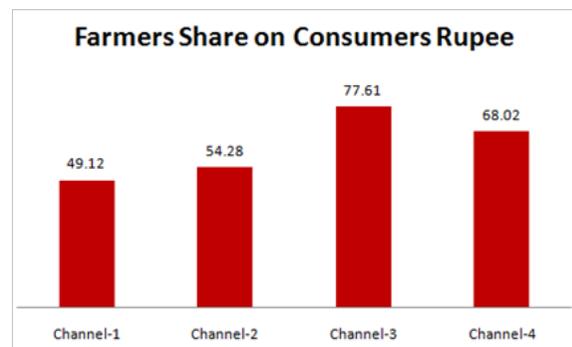The following were the channels observed during the study

Channel-1: Farmer-Assembler-Commission agent- Wholesaler-Retailers

Channel-2: Farmer-commission agent- Wholesaler- Retailer

Channel-3: Farmers-traditional retailers- Consumers

Channel-4: Farmers- Collection centers of organized retailers-Consumers
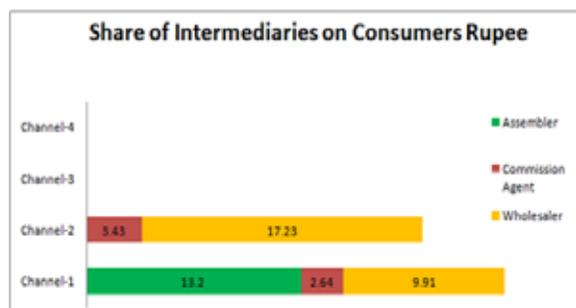
Chart-1

Farmers Share on Consumers Rupee

A comparative view of farmer's share of the different marketing channels had presented in Chart-1. It was evident from the chart that the farmers share in consumers rupee decreased with the increase in the length of the marketing channels. It was observed that the producer share on price paid by the consumer rupee was lowest (47.04 percent) in channel-1, and it was the longest channel with maximum number of middleman between producer and consumer. Thus, the Channel-1 was the least favorable to the producers as their share was the lowest in consumer rupee. It was due to presence of large number of middleman. So, the farmers were not getting the remunerative price for their produces in Channel-1.

The alternate channel-4 showed that 68.02 percent which was

higher than the Channel-1 and 2. Here the farmers share on con-sumer rupee was higher because of direct procurement by the retailers from farmers. It was also mentioned here that in chan-nel-1 the price paid by the consumer was highest but, the farmer share in channel-1 was lowest as compare to all other channels in study area. However, price paid by the consumer was lowest in chalnnel-4 as compared to other channels, but the price paid to the consumer was higher than the channel-1 and 3 and at par with channel-2.

Chart-2

Share of different intermediaries in consumer rupee

A comparative view of intermediaries share on consumer rupee in the different marketing channels was presented in Chart-2. The existence of assembler can be seen in channel-1. The mar-gin earned by the assembler was 13.20 percent of total price paid by the consumer for per quintal cabbage. The wholesaler exists in channel- 1 and 2. There was no evidence of wholesaler in channel- 3 and 4 because of direct selling of the produces by the farmers in market or to the retailer or direct procurement by the retailer from farmers. In channel-4 retailers are directly procuring from the farmers. There was an evidence of commis-sion agent in channel -1 and 3 as compared to channel 2 and 4. In channel -2 the margin earned by the commission agents (3.43 percent) was higher than the Channel-1 (2.64 percent). It was observed that in channel-1 the buyers from assembler were the wholesaler, and because of the volume of procurement they have the higher bargaining power than the farmers in channel-2. As a result the commission earned by the commission agent was lesser in channel-1 as compared to channel-2.
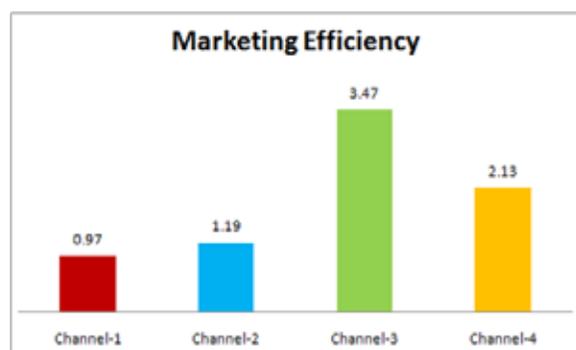
Chart-3

Chart- Marketing Efficiency of different marketing channels calculated through Acharya's method

The marketing efficiency was calculated for the identified four channels by Acharya's method. Marketing efficiency was found to be highest in Channel-3 (3.47), followed by Channel-4 (2.13), Channel-2 (1.19) and least in channel-1 (0.97) when calculated by Acharya's method (i.e. price received by the farmers divided by total marketing cost plus total marketing margins).

Findings and conclusion

- Large number of middleman's was observed between pro-ducer and consumer during the study.
- It was evident from the study that the farmers share in con-sumers rupee decreased with the increase in the length of the marketing channels
- Channel-1 was the least favorable to the producers as their share was the lowest in consumer rupee. It was due to pres-ence of large number of middleman. So, the farmers were not getting the remunerative price for their produces in Channel-1.
- The Channel-3 depicted highest (77.61 percent) return to the producer as producers directly sell their products to the re-tailer. It is not commercially viable option because hare the small/marginal farmers sell their surpluses after consump-tion directly to the market.
- The alternate channel-4 showed that 68.02 percent which was higher than the Channel-1 and 2. Here the farmers share on consumer rupee was higher because of direct pro-curement by the retailers from farmers.
- The intermediaries like assembler, commission agent and wholesalers earned more than 25% of the price paid by the consumers without investing anything in production.
- Marketing efficiency was found to be highest in Channel-3 (3.47), followed by Channel-4 (2.13) (alternate channel), Channel-2 (1.19) and least in channel-1 (0.97) when calcu-lated by Acharya's method

The profit margins of commission agents, wholesalers and retail-ers account for quite a large proportion of the price paid by the consumers, which indicates existence of inefficiency in vegetable marketing system. Provision of post harvest infrastructural facil-ities like storage, processing, grading etc., will increase the mar-keting efficiency and strengthened. Effective measures are need to increase the growers share's in consumers price by strict im-plementation of marketing rules and regulation and by minimiz-ing the number of middlemen and distribution channels. Creat-ing marketing organization with assembling centers at growing areas, arrangements of loans, and advance supply of inputs and transport for picking the produce may increase the farmers share in consumers rupee. Linking farmers with organized re-tailers may also enhance the farmers of share as they eliminated all middlemen's from the channel.

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