

Marketing Efficiency of Milk Dairies and its byproducts for Co-operative and Private Dairy Plants in Maharashtra

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Abstract:

The marketing of milk and its products by dairy plants of co-operative and private sectors in Maharashtra has been compared. The study is based on the data collected for cow's and toned milk, standardized milk, full cream milk, flavoured milk, butter and ghee from the selected co-operative and private dairy plants of the Nashik district for the financial year 2013-2019. It has been found that the marketing cost for cows and toned milk is same in both the co-operative and private dairy plants, whereas it is higher for standard milk, full cream milk and flavoured milk in the co-operative dairy plant. The marketing cost has been found less in the co-operative dairy plant for products like butter, ghee and flavored milk. All the dairy products earn more marketing margins in the private than co-operative plant, except for toned milk. The marketing efficiency analysis of co-operative dairy plant for all dairy products has been observed relatively less than that of private dairy plant, except toned milk. The study has suggested the development of co-operative milk dairy industry in a sustainable manner, the co-operative dairy plants should formulate long-term vision/mission and strategy. The study has observed that value addition in dairy products should be done without compromise the quality and consumer-oriented market research and development should be accorded greater attention.

Introduction

The economical marketing efficiency and success of co-operative and private dairy plants largely depends on the effective management of operations like milk procurement, processing and distribution channel of dairy products. A marketing efficiency analysis is one, which minimizes the cost of marketing services to ensure the largest share of producer in the consumer rupee. On the other hand, the consumers should be provided with quality dairy products at a reasonable price. Thus, marketing of dairy products is an imperative component of dairy development and has drawn attention of planners, policymakers, researchers and trading communities.

In India, the marketing of milk and its byproducts is dominated by the unorganized sector, and the organized sector handles only about 16 per cent of total milk production (Government of India 2018). The cooperative dairies are considered as one of the vital channels to improve milk production and reduce the cost of procurement, processing and marketing of dairy products through economy of scale approach. After liberalization, the co-operative dairy plants are facing cut-throat competition from the private dairy plants for market share. Pawar & Sawant Committee (1979) has confirmed that the private dairy plants use their resources efficiently and reduce their total operational costs as compared to those by the co-operative dairy plants.

Thus, any increase in operational cost in the value-addition chain leads to a decrease in the marketing efficiency of co-operative dairy plant. A number of parameters like marketing efficiency cost, marketing margin, marketing efficiency etc. Depend on the structure of milk and its byproducts market. Marketing costs and its margins of a particular commodity reflect the efficiency of a system to a great extent. The analysis of marketing efficiency costs and margins of dairy plants would help in reducing the unwarranted costs in marketing of milk dairy products.

Materials and Methods

To compare the marketing and sells aspects of cooperative and private dairy plants, one milk plant each from the co-operative and private sectors were selected purposively in the Nashik district of Maharashtra. The installed capacity of each of these plants was 3 lakh litres per day. The average daily milk procurement of the co-operative dairy plant was 1,50,000 litres. On an average, the plant processed 1,90,000-2,00,000 litres per day of market milk, namely toned milk, cows milk, standardized milk and full cream milk. The surplus or extra milk was converted into various dairy products, namely, 'Butter', 'Ghee', 'Flavoured milk', and 'Milk peda'. The milk and its byproducts of the co-operative dairy were sold through booths, parlors, sweet shops, wholesalers, retailers and clearing and forwarding agents. On the other hand, the average milk procurement of the private dairy plant was 2,50,000 litres per day. It processed around 1,95,000 – 2,05,000 litres of market milk per day in four types of milk, namely toned milk, cow's milk, standardized milk and full-cream milk. The excess or extra milk was converted into several products like butter, ghee, flavoured milk and paneer and the milk dairy products were sold through wholesalers, sweet shops retailers and commission agents for the private dairy.

Methodology

The cost/expenses of milk procurement were ascertained by taking into account the costs on collection, transportation, chilling and delivery of milk at the reception counter. For working out cost of milk collection for the co-operative dairy plants and private dairy plants, 50 milk producer co-operative societies and 40 milk collection centers were selected by the probability proportion to sample size method, based on quantity of milk collected. For finding transportation cost, 40 routes from co-operative plant and 40 routes from private plant were selected by the probability proportion to sample size method, based on the quantity of milk transported. To work out the chilling cost, all the chilling centers which were attached to the cooperative and the private dairy plants were selected.

To work out the processing and distribution costs, the major dairy products, viz. toned milk, cow's milk standardized milk, full-cream milk, flavoured milk, butter, ghee, milk peda and paneer were taken in this study from both the plants. The data were collected for the financial year 2001-02 from the different sections (viz. procurement, processing, manufacturing, and distribution) of the selected dairy plants. The collected data were analyzed to ascertain marketing cost, marketing margin and marketing efficiency of different dairy products using tabular analysis. Marketing efficiency was worked out through Shepherd's formula.

● Costing Methodology

(a) Marketing Cost

In a dairy plant, the total marketing cost comprises costs on milk procurement, its processing and distribution of dairy products.

Milk Procurement Cost

Cost of milk procurement included costs on collection, transportation, chilling and delivery of milk at the reception dock by following the methodology outlined in dairies.

Manufacturing Cost of Milk Products

The manufacturing cost comprises cost of raw material and total processing cost of dairy products. The total processing cost of dairy products comprises expenditures on electricity, water, steam, refrigeration, maintenance and repairs, stationery and stores, labour, packing materials, detergents, besides quality control

expenditure, salaries and administrative expenses, depreciation on buildings, equipments and machinery, interest on investment in buildings, plant equipment and machinery, losses in milk and milk solids and miscellaneous costs. The interest was calculated at the rate of 6.25 per cent per annum on the value of equipments and machinery and electric installations in all the sections of dairy plant. The depreciation values of equipments, machineries and all sections of dairy plant buildings were taken either from the account books or accounts section of the respective dairy plants.

Distribution Cost

Distribution cost included expenses on advertisement, sales promotion, rent of booths and parlours, salary of marketing and sales personnel, stationery, telephone, conveyance, sales commission to wholesalers, retailers and commission agents, transportation of milk and milk products to booths, parlours and sales outlets, storage of milk and milk products under refrigerated condition, loading and unloading of milk and milk products in the dairy plant, sales tax, and depreciation, interest and other miscellaneous costs. Depreciation on transport vehicles were taken from the books and accounts section of the respective dairy plants. The interest was calculated at the rate of 6.25 per cent per annum on the value of transport vehicles. Total distribution cost was apportioned to milk and milk products based on their total sales value.

(b) Marketing Margin

Marketing margin of a dairy plant was taken as the difference between the selling price of a product per unit and the total cost of its manufacturing and distribution.

(c) Marketing Efficiency

Marketing efficiency is the ratio of value addition for the goods to their marketing cost (Shepherd,1965), where the value added is the difference between the costs of goods purchased by a firm and price for which it sells those goods (Khol and Uhl, 1967).

Conclusions and Policy Implications

This study on marketing efficiency of dairy products for co-operative and private plants has shown that the marketing cost for toned milk is same for both the dairy plants, whereas it has been found higher for standardized milk, full-cream milk and flavoured milk in the co-operative dairy plant. However, for butter and ghee, marketing cost has been observed less in the co-operative dairy. All dairy products, except toned milk of private dairy, have recorded higher marketing margins in private than co-operative plant. The marketing efficiency for all dairy products, except toned milk, has been found lower for co-operative than private dairy plant. Based on the insights provided by the study, the following policy implications have been suggested to make the co-operative and private dairy plants more skilled at milk procurement, processing, manufacturing, and sales and distribution levels (Dr. B. B. Rayate & Bhagwan N. Elname, 2007b).

(a) Milk Procurement Level

- ✓ Development of efficient milk collection centres with proper cooling facilities and transportation networks at farmer's level by co-operative and private dairy plants would help strengthen the linkages between dairy farmers and dairy industry.
- ✓ Co-operative dairy plants should make regular, and if possible, advance payments to milk producing members to avoid milk-selling to milk vendors.
- ✓ Educating /Imparting training to dairy farmers at Milk Producers' Co-operative Society/collection centers about hygiene in milk production will improve the quality of procured milk.

(b) Processing and Manufacturing Level

- ✓ The dairy plants should utilize the full plant capacity to reduce costs on processing and manufacturing of their products.
- ✓ The old machinery and equipments should be replaced to reduce cost on repairs and maintenance.
- ✓ Qualified and technical persons should be recruited.
- ✓ Quality control of dairy products should be evolved.
- ✓ The product mix should be reoriented as per the changing market environment and superfluous expenses should be avoided.

(c) Sales and Distribution Level

- ✓ Consumer-oriented market research and development should be accorded higher Attention.
- ✓ The private dairy plants should lower the sales commission being paid to commission agents, wholesalers, retailers and other selling agents to reduce distribution cost.
- ✓ The quantity of dairy products distribution should be increased to bring down distribution cost.

Acknowledgments

The financial assistance provided by NDRI (ICAR), Karnal, for carrying out research work and the data provided by the co-operative and private dairy plants are gratefully acknowledged. The authors are thankful to the anonymous referee for his useful comments and suggestions. 242 Agricultural Economics Research Review Vol. 21 July-December 2008

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