Effectiveness of Distribution Channel in a Co-operative Dairy Plant: A Marketing Perspective

C. Magesh Kumar

Research Scholar, Department of Business Administration
Annamalai University, Chidambaram, Tamil Nadu, India
 https://orcid.org/0000-0002-9876-4898

G. Agalya

Assistant Professor, Department of Management Studies
Manakula Vinayagar Institute of Technology, Pondicherry, India
 https://orcid.org/0000-0003-0808-5777

Abstract

The present study investigates the effectiveness of distribution channels in the marketing perspective of a co-operative dairy plant. The study was conducted to improve the effectiveness of the distribution channel by identifying the pitfalls in the present system. The descriptive type of research is employed, and the questionnaire method was used to collect the agents' data. Analyzing the collected data, it is understood that the distribution channel is satisfied with the service in the organization, and it is also insisted that the need for further improving the delivery service of the distribution channel would certainly lead to a better outcome.

Keywords: Effectiveness, Distribution channel, Marketing perspective, Co-operative dairy plant

Introduction

Dairying plays a significant role in strengthening the national rural economy. Indian dairy sector has rapid growth in the last three decades by the contribution of dairy co-operatives under the Operation Flood (OF) Project. This played an important role in facilitating the participation of small stakeholders in this growing sector. Dairy co-operatives play a vital role in the marketing of milk and milk products for domestic dairy development. Numerous studies were conducted in the consumer perspective towards dairy products. The present study is an attempt to examine the effectiveness of distribution channels in a dairy co-operative plant.

Review of Literature

Distribution channel is the method by which product must be moved within the right amount at the proper time to a specific place to be delivered most effectively to the end-user. The effectiveness of the distribution channel depends upon the factors like delivery, availability, price, schemes, and satisfaction level of retailers. Weitz et al. stated that the coordination of manufacturers' and retailers' perspectives in the distribution channel would improve the efficiency and maximize the profits of the firm. Rangasamy et al. suggested the co-operative dairy plants improve the distribution level of milk and milk products to attain marketing efficiently. Previous studies of dairy products related to the marketing area are consumer behavior, customer perception, and branding.

The consumer behavior towards the Aavin milk in different places of Tamil Nadu resulted in price and quality are the major factors for purchasing the milk. Ananda Kumar et al. analyzed the factors influencing consumer behavior of dairy products in Pondicherry and finds that Ponlait is the most preferred brand by consumers. The customer perception towards the various milk and milk products in different locations of Tamil Nadu resulted in advertisement and level of satisfaction are the main factors for preferring the dairy products. However, household consumption patterns and branding of milk and milk products also lead to the preference of consumers and helps in developing a market position. To improve the market share of Milma milk, Sharath et al. studied the satisfaction level of customers and dealers.

Objectives of the study
1. To understand the existing distribution channel system of PONLAIT.
2. To find out the various strategies adopted by PONLAIT for marketing its products.
3. To determine the agent's satisfaction level towards the present distribution channel.
4. To identify the pitfalls in the present distribution channel based on the agent's opinion and provide valuable suggestions to overcome them.

Research Methodology
Study Design: The type of research design employed in this study is descriptive research.

Study Location: The fieldwork was carried out at the distribution channel of Pondicherry Co-operative Milk Producers Union Limited (PONLAIT), Pondicherry.

Duration: June 2018 to July 2018

Collection of Data: Both the primary and secondary data were collected from its sources. The primary data was collected from the agents of PONLAIT in Pondicherry by means of questionnaires. The secondary data was collected from the various published articles and journals.

Sample Size: 115 agents

Sampling Method: Complete enumeration method

Research Instrument: Data was collected by the survey method. The survey made for the research is of Questionnaire method. The questionnaire was structured and close-ended.

Statistical Tools
1. **Percentage Analysis:** Percentage analysis is used to find the percentage value of respondent choices.

$$Percentage\ of\ Respondent = \frac{Number\ of\ Respondent}{Total\ Number\ of\ Respondents} \times 100$$

2. **Weighted Average Method:** Weighted average method is used to analyze ranking in factors and level of satisfaction of the respondents.

$$\frac{W_1 + X_2 W_2 + X_n W_n)}{(W_1 + W_2 + W_3)} = \frac{\sum_{i=1\ to\ n}(X_i W_i)}{\sum_{i=1\ to\ n} W_i}$$

Where,
X is the factor
W is the weight of the respondent value

3. **Pearson's Correlation Analysis:** Pearson's Correlation analysis is used to evaluate the linear relationship between two variables.

$$r = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \sum(y_i - \bar{y})^2}}$$

Where,
r is the correlation coefficient
x_i is the values of the x – variable in a sample
$\bar{x}$ is the mean of the values of the x – variable
y_i is the values of the y – variable in a sample
$\bar{y}$ is the mean of the values of the y – variable

Data Analysis and Interpretation
Requirement of Respondents
It is found that 52.5% of the respondents reveal that the requirement of PONLAIT dairy products is based on the sales, 39% of the respondents reveal that the requirement is based on the customer's demand for PONLAIT dairy products, and 5.5% of the respondents reveal that the requirement is based on the replacement of the other products.

Table 1: Source of Information

S. No.	Factors	No. of Respondents	Percentage (%)
1	Internet	22	19
2	Advertisement	35	30.5
3	Branches	18	15.5

4	Banners	29	25.5
5	Pamphlets	11	9.5
	Total	115	100

Inference: From the above table, it is inferred that 30.5% of the respondents reveal advertisement as the source of information and 9.5% of the respondents reveal pamphlets as the source of information.

Table 2: Strategy for Promotion

S. No	Factors	No. of Respondents	Percentage (%)
1	Advertisement	35	30.5
2	Sales promotion	8	6.5
3	Personal selling	29	25
4	Publicity	42	38
	Total	115	100

Inference: From table, it is inferred that 6.5% of respondents reveal sales promotion as strategy to promote its products and 38% of respondents reveal publicity as the strategy to promote its products.

Table 3: Quality of the PONLAIT Distribution Channel

S. No.	Factors	No. of Respondents	Percentage (%)
1	Excellent	45	39.5
2	Very good	25	21.5
3	Good	30	26.5
4	Average	12	10.5
5	Poor	3	2
	Total	115	100

Inference: From the above table, it is inferred that 39.5% of the respondents reveal excellent the quality of the PONLAIT, and 2% of the respondents reveal poor quality of the PONLAIT.

Table 4: Supply Norms of the PONLAIT

S. No	Factors	No. of Respondents	Percentage (%)
1	Highly satisfied	20	17.5
2	Satisfied	32	27
3	Moderate	30	26
4	Dissatisfied	27	23
5	Highly dissatisfied	6	4.5
	Total	115	100

Inference: From the above table, it is inferred that 27% of the respondents reveal satisfaction with the supply norms of the PONLAIT, and 4.5% of the respondents reveal satisfaction with the supply norms of the PONLAIT.

Table 5: Timely Delivery

S. No	Factors	No. of Respondents	Percentage (%)
1	Always	19	16
2	Often	12	11.5
3	Sometimes	46	40
4	Rarely	10	8.5
5	Never	28	24
	Total	115	100

Inference: From the above table, it is inferred that 40% of the respondents sometimes reveal the timely delivery and 8.5% of the respondents rarely reveal the timely delivery.

Convey the Schemes in Time

It is identified that 42.5% of the respondents reveal that there is conveyance of the schemes in time and 57.5% of the respondents reveal no such conveyance in time.

Table 6: Margin Provided to the Respondents

S. No	Factors	No. of Respondents	Percentage (%)
1	Highly satisfied	21	19
2	Satisfied	43	38
3	Moderate	28	24
4	Dissatisfied	14	12
5	Highly dissatisfied	9	7
	Total	115	100

Inference: From the above table, it is inferred that 7% of the respondents are highly dissatisfied with the margin provided, and 38% of the respondents are satisfied with the margin provided.

Table 7: Quality of PONLAIT

S. No	Factors	No. of Respondents	Percentage (%)
1	Highly satisfied	55	47.5
2	Satisfied	41	36.5
3	Moderate	12	10.5

4	Dissatisfied	5	4.5
5	Highly dissatisfied	2	1
	Total	**115**	**100**

Inference: From the above table, it is inferred that 47.5% of the respondents are highly satisfied with the quality of the PONLAIT and 1% of the respondents are highly dissatisfied with the quality of PONLAIT.

Insufficient Delivery Problem

It is found that 54% of the respondents reveal that there is an insufficient delivery problem and 46% of the respondents reveal that there is no such problem.

Analysis of Ranking given by the Respondents regarding the Level of Satisfaction towards the dairy product in Present Distribution Channel

Table 8: Respondents Values for Present Distribution Channel

Factors	Highly satisfied	Satisfied	Moderate	Dissatisfied	Highly dissatisfied	Total
Quality	28	17	21	32	17	115
Taste	25	20	32	17	21	115
Packing	20	14	18	35	28	115
Date of manufacturing & expiry	19	28	32	21	15	115

Table 9: Weighted Average Values for the Satisfaction Level for Present Distribution Channel

Weight		5	4	3	2	1		
Factors	Weight (W)	Highly Satisfied	Satisfied	Moderate	Dissatisfied	Highly Dissatisfied	Total	Rank
Quality	X_1	28	17	21	32	17	115	2
	$X_1 W$	140	68	63	64	17	352	
Taste	X_2	25	20	32	17	21	115	1
	$X_2 W$	125	80	96	34	21	356	
Packaging	X_3	20	14	18	35	28	115	4
	$X_3 W$	100	56	54	70	28	305	
Date of manufacturing & expiry	X_4	19	28	32	21	15	115	3
	$X_4 W$	95	112	63	42	15	327	

Inference: It is noted from the table that respondents rank first place to taste and respondents rank last place to packaging.

Analysis of Ranking given by the Respondents regarding the Factors of Distribution Channel

Table 10: Respondents Values for the Factors of Distribution Channel

Factors	Excellent	Very good	Good	Average	Poor	Total
Availability of distribution channel	25	20	36	14	20	115
Communication	16	44	13	27	15	115
Quality of Means and Modes	9	31	23	17	35	115

Table 11: Weighted Average Values for the Factors of Distribution Channel

Weight		5	4	3	2	1		
Factors	Weight (W)	Excellent	Very good	Good	Average	Poor	Total	Rank
Availability of distribution channel	X_1	25	20	36	14	20	115	2
	$X_1 W$	125	80	108	28	20	358	

Communication	X_2	16	44	13	27	15	115	1
	X_2 W	80	176	39	54	15	364	
Quality of means and modes	X_3	9	31	23	17	35	115	3
	X_3 W	45	124	69	34	35	271	

Inference: It is noted that from the table that respondents rank first place in communication, and respondents rank last place to the quality of means and modes.

Analysis of Ranking given by the Respondents regarding the Level of Satisfaction towards the adopted Factors for Improving marketing of dairy products

Table 12: Respondents Value for the Satisfaction Level for Factors Improve Marketing

Factors	Excellent	Very Good	Good	Average	Poor	Total
Packing quality	23	26	14	25	29	115
Cost	20	29	25	20	23	115
Product appearance	29	23	26	14	25	115
Brand image	28	17	21	32	17	115
Delivery	19	28	32	21	15	115

Table 13: Weighted Average Values for Satisfaction Level for Factors Improve Marketing

Weight		5	4	3	2	1		
Factors	Weight (W)	Excellent	Very Good	Good	Average	Poor	Total	Rank
Packing quality	X_1	23	26	14	25	29	115	1
	X_1 W	115	104	42	100	29	390	
Cost	X_2	20	29	25	20	23	115	3
	X_2 W	100	116	75	40	23	354	
Product appearance	X_3	29	23	26	14	25	115	2
	X_3 W	145	92	78	28	25	368	
Brand image	X_4	28	17	21	32	17	115	4
	X_4 W	140	68	63	64	17	352	
Delivery	X_5	19	28	32	21	15	115	5
	X_5 W	95	115	63	42	15	327	

Inference: It is noted from the table that respondents rank first for the packaging, and respondents rank the last place to delivery.

Analysis of Opinion of Respondents regarding the Distribution Channel and the Quality of the Product

Hypothesis

H_0**:** There is no relationship between the distribution channel and the quality of the PONLAIT

H_1**:** There is a relationship between the distribution channel and the quality of the PONLAIT

Table 14: Feel about the Distribution Channel of PONLAIT

S. No.	Factors	No. of Respondents
1	Excellent	50
2	Very good	32
3	Good	25
4	Average	6
5	Poor	2
	Total	115

Table 15: Quality of the PONLAIT

S. No.	Factors	No. of Respondents
1	Excellent	45
2	Very good	25

3	Good	30
4	Average	12
5	Poor	3
Total		115

Table 16: Pearson's Correlations

		Superior	Performance
Superior	Pearson Correlation	1	.84**
	Sig. (2-tailed)		.000
	N	115	115
Performance	Pearson Correlation	.84**	1
	Sig. (2-tailed)	.000	
	N	115	115

Result: From the SPSS output generated, the correlation value is 0.84, and the significant value is 0.000, which is less than 1, so the null hypothesis is rejected.

Inference: From the above table, it is found that the significant value is 0.000, which is less than 0.05. Hence null hypothesis is rejected. Thus there is a significant relationship between the quality of the PONLAIT and the feel about the distribution channel. From the above table, it is also clear that R=0.84 while is less than R=1. Hence the variables such as the quality of the PONLAIT and feel about the distribution channel are positively correlated.

Suggestions and Recommendations

- It is noted from the research that respondents are not satisfied with the insufficient delivery problem. Hence it is suggested to the organization to resolve the delivery problem by improving the transportation facilities.
- The researcher identifies that the improvement in the quality of means and modes of the organization is needed. Hence it is suggested to the organization to improve the quality of means and modes in the distribution channel.
- From the study, the researcher identifies that the respondents are satisfied with the quality of products. Hence it is suggested to organization to continue the same for long period.

- The researcher suggests the organization have a market watch and to identify the changing needs and wants of the customers for positioning the products in the minds of the customers for everlasting period.

Conclusion

As we know that PONLAIT is a big co-operative organization and a market leader in milk products in Pondicherry. It has a maximum market share in milk; with the help of research, a company can find out its weak points in milk products and can increase its market share through rectifying setbacks. Quality, price, packing style, varieties, quantity, and product availability all have a tremendous impact on the position of the brand in customer's preference. The major drawback is not providing on-time delivery service. Hence the organization may consider these factors for expanding their territory.

References

Abinaya, K., and A. Santhi. "A Study on Customer Preference on the Dairy Products in Madurai District, Tamil Nadu." *International Journal for Advance Research and Development*, vol. 3, no. 8, 2018, pp. 142-146.

Balakrishnan, P., and S. Manimegalai. "A Study on Customer Preference towards Aavin Milk Products with Special Reference to Nilgiri District." *International Journal of Trend in Scientific Research and Development*, vol. 3, no. 6, 2019, pp. 888-893.

Jeshurun, Subramania Bala. "An Empirical Study on Effectiveness of Retail Distribution channel in Visakha Dairy Dealing with Milk & Milk Products in Visakhapatnam." *TRANS Asian Journal of Marketing & Management Research*, vol. 1, no. 3 & 4, 2012.

John, S. Franklin, et al. "Branding is the Solution for Product Differentiation in Indian Dairy Industry." *IOSR Journal of Business and Management,* vol. 14, no. 3, 2013, pp. 93-99.

Joseph, Sharath, and A. Seema. "A Study on Improving the Market Share of Milma Milk - With Special Reference to Customer Satisfaction and Dealer Satisfaction, Kerala." *International Journal of Business and*

Management Invention, vol. 5, no. 10, 2016, pp. 75-107.

Kumar, A. Ananda, and S. Babu. "Factors Influencing Consumer Buying Behavior with Special Reference to Dairy Products in Pondicherry State." *International Monthly Refereed Journal of Research in Management and Technology,* vol. 3, 2014, pp. 65-73.

Mary, C. Jothi. "A Study on Consumer Behaviour of Aavin Milk in BHEL Township: Trichy." *International Journal of Advance Research in Computer Science and Management Studies*, vol. 1, no. 4, 2013, pp. 34-39.

Rajendran, K., and Samarendu Mohanty. "Dairy Co-operatives and Milk Marketing in India: Constraints and Opportunities." *Journal of Food Distribution Research,* vol. 35, no. 2, 2004, pp. 34-41.

Rangasamy, N., and J.P. Dhaka. "Marketing Efficiency of Dairy Products for Co-operative and Private Dairy Plants in Tamil Nadu - A Comparative Analysis." *Agricultural Economics Research Review,* vol. 21, 2008, pp. 235-242.

Saravanan, R., et al. "A Study on Households' Consumption Pattern of Aavin Milk in Erode District." *International Journal of Research in Commerce, Economics and Management,* vol. 3, no. 7, 2013, pp. 6-9.

Shamsudeen Ibrahim, S.A. "Milk Production and Marketing with Special Reference to Madurai District, Tamil Nadu." *Shanlax International Journal of Commerce*, vol. 2, no. 1, 2014, pp. 56-61.

Singh, Bais Santosh, and Ramesh B. Agadi. "Marketing of Branded Diary Milk Products in Gulbarga District in Karnataka - A Survey of Consumers and Milk Vendors." *Journal of Contemporary Research in Management*, 2008.

Sulthan, Mohideen A., et al. "A Study on Brand Image with Special Reference to Aavin Milk in Theni Town." *International Journal of Research in Social Sciences,* vol. 6, no. 11, 2016, pp. 243-246.

Sumathi, S. "The Customer Perception towards Marketing of Different Brands of Packaged Milk." *International Journal of Research in IT & Management,* vol. 5, no. 6, 2015, pp. 36-43.

Vinayagamoorthy, A., et al. "A Study on Consumer Satisfaction of Aavin Milk in Salem City." *Indian Journal of Applied Research,* vol. 1, no. 9, 2012, pp. 31-33.

Weitz, Barton, and Qiong Wang. "Vertical Relationships in Distribution Channels: A Marketing Perspective." *The Antitrust Bulletin,* vol. 49, no. 4, 2004, pp. 859-876.

Author Details

C. Magesh Kumar, *Research Scholar, Department of Business Administration, Annamalai University Chidambaram, Tamil Nadu, India,* **Email ID:** *magesh245@gmail.com*

G. Agalya, *Assistant Professor, Department of Management Studies, Manakula Vinayagar Institute of Technology, Pondicherry, India,* **Email ID:** *agalya.gss@gmail.com*