



“THE MARKETING EFFICIENCY ANALYSIS OF MILK DAIRIES & ITS BY-PRODUCTS WITH REFERENCE TO ITS PRODUCTION AND DISTRIBUTION OF COOPERATIVE AND PRIVATE DAIRY PLANTS IN NASHIK DISTRICT (MAHARASHTRA)”

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1. ABSTRACT

It is clear that there is significant relationship between the distribution channels and marketing efficiency of milk products of Nashik Milk Dairies. Depending on their role and scope of the market conditions, the number of distribution channels is involved in the logistics and delivery activities. In the present study, the researcher has given minimum one to maximum four levels. The survey reveals that the two-level distribution channels (Producer - Wholesaler / Distributor- Retailer – Consumer) is highly used by the dairy firms with 40.97% majority while One-Level and Four-Level distribution channels are given less preference 11.61% and 15.81% respectively. In addition, the Cross-Table 1.5 entitled –Interdependence between Logistics Performance and Distribution of Milk Products also reveals that Two-Level Distribution Channel are given the highest rating of 3 meaning meeting the expectations as committed. 40.97% have supported the view by responding in the present survey. The two-level distribution channels are more efficient due to limited control, cost-effective. They cater the marketing needs of customer communication, coordination and timely delivery of milk products.



Further, the study finds that technology can empower the Milk Dairies to standardize products and processes. Various tools and systems are placed to maintain the quality standard while manufacturing the products. Taking the responses of sales executives into account, 48.06% milk dairies have been managing the quality control manually (man-made) in their respective plants. 43.55% are semi-automated dairies in Nashik district. Surprisingly, only 8.39% are fully-automated meaning effective use of technology for quality control and maintenance. It shows that technology can leverage the scope of 50% dairies have full scope while remaining milk dairies have partial scope of applying technology. The second survey conducted for the milk consumers also support the hypothesis. According to 74.29% milk consumers of TABLE NO 5. 19 of the consumer survey, the companies (here, milk dairies and processors) should use online platforms (tools, systems) for marketing activities. Since, it is the demand of existing customers with majority; it has high weightage from customer-centricity. It means the milk consumers are also in favour of making use of technology.

Dairy industry has been going through the transition phase. It is dependent on the agriculture. It is multi-disciplinary sector which needs sound knowledge of dairy technology, management, marketing, inventory, procurement, processing, finance and strategic policy framework. The dairies need to

understand the market dynamics, changing behavioural buying patterns, work on quality benchmark and make more competitive milk products. The product, price, place and promotion should be well-integrated to increase the marketing efficiency. The use of hi-end technology and online platforms like website, mobile application, social media can give competitive advantages to the milk dairies reaching to the masses, raising awareness in less time and cost too. The modern methods, tools, technique leverage the scope of sustainable business growth.

2. INTRODUCTION

India is one of the biggest producers of milk products. Denmark has the highest production of milk and milk products and succeeded in exporting them to all over the world. Though India has huge potential and high production of milk, there needs to be special initiatives to increase the export (Dastagiri, 2004). Secondly, the private and cooperative dairies have still a long way to go and maximize the benefits and profits. Marketing and sales is the soul of any business. Many of the local private and cooperative dairies fail in the business policy and strategic management. Sometimes, there is a gap of communication, coordination amongst various departments. Strategic marketing is something which will leverage the scope of the dairy products in terms of awareness, branding, market share, profitability, and total revenue generation as well. Few Indian brands like Amul, Mother Dairy have initiated various strategies to reach the masses in lesser time and created goodwill, brand, creative advertising. However, the percentage is quite low in this regard. The same situation exists in Maharashtra to some extent. There is a crucial need to review, examine, introspect and draft highly competitive, market-driven, customer-centric marketing strategy for the dairy players to survive and sustain in the long-term to achieve the common organizational goals (Landes, 2007).

3. RATIONALE OF THE STUDY

Marketing is an art as well as a science. Those are the successful firms who have the right balance of the two at workplace. Marketing is an interdisciplinary concept. A marketing professional should have sound knowledge of psychology, language, geography, management, anthropology, behavioural sciences and so on. The marketing team need to concentrate on integration of marketing mix all the time. There should be a mechanism to get recent updates and trends of current market conditions Alexandratos & Jelle (2012: 139). They have to be studied carefully. Timely and effective decision-making empower the marketing team to achieve the goals and boost their confidence. Hence, the effectiveness and analysis of marketing strategy is a must to keep the firms competitive and a learning organization. This is also applicable to the milk dairies. Stakeholder management (farmers, investors, creditors, distributors and consumers) is badly required these days. Therefore, the present topic is taken for the study.

4. OBJECTIVES OF THE STUDY:

Broad objectives as visualized to be achieved should be clearly outlined and these should be itemized. These objectives will indicate the major aspects of the study to be undertaken. The present study has the following objectives:

- 1) To study the present market conditions of milk dairy industries in Maharashtra State and Nashik District respectively
- 2) To examine the relationship between the distribution channels and marketing efficiency of milk products of Nashik Milk Dairies
- 3) To analyze the scope of technology in production and distribution of milk products in Nashik District
- 4) To identify the marketing challenges of milk dairies from production and distribution with references to cooperative and private dairy plants in Nashik District
- 5) To suggest possible solutions to overcome the marketing challenges for sustainable business growth with respect to cooperative and private dairy plants in Nashik District

5. HYPOTHESIS

Following hypotheses are constructed for the study:

The researcher has framed the following hypotheses for the present study:

Hypothesis 1:

H₁: There is significant relationship between the distribution channels and marketing efficiency of milk products of Nashik Milk Dairies.

Hypothesis 2:

H₂: Technology can empower the Milk Dairies to standardize products and processes.

Hypothesis 3:

H₃: The marketing strategies influence the buying behaviour of milk consumers.

6. RESEARCH METHODOLOGY

A proper selection of research methodology is very important for any researcher to be at minimum risk position. Research Methodology provides a structure for decision-making like implicit question are posed, explicit answer proposed, collection analysis and interpretation of information.

John W. Best defines Research, "as the systematic and objective analysis and recording of controlled observations that may lead to the developments of generalizations, principles, or theories, resulting in prediction and possibly ultimate control of events". The researcher is utilizing below research design to complete this research and using descriptive research.

6.1 Data Collection:

The data was collected for various aspects for this research and it was collected through following sources –

Primary sources:

The primary data consists of three types of target respondents exclusively for the sales executives, milk consumers and dairy chairpersons respectively. In short, all the key stakeholders are covered as the target respondents. The survey was conducted within the period of two months for those participants who reside within the geographical boundaries of Nashik district. Hence, the study becomes more comprehensive since the perceptions, views, opinions, ideas, likes, preferences and factors such as buying decision-making process, competitiveness, technology edge etc. While conducting the survey discussion and observations were made. Therefore, data was collected through A) Interview Method B) Questionnaire C) Discussion etc. The data are analyzed separately.

Secondary Sources:

Secondary data is equally important in the research study since a lot of standard and highly professional resources are published relevant to study. The present study includes research papers, industry reports, articles, case studies, blogs, government databases, magazines and various international, national and regional web portals and websites. These sources provided insights for the conceptual framework of the study and helped in defining the key variables of the study & their interrelationship with each other.

6.2 Tools used for data collection

Three different sets of questionnaires prepared as the instruments for collecting data. There are 46, 44 and 14 questions framed for sales executives, milk consumers and dairy chairpersons respectively. The survey method is used for the present study. The questionnaires included set of standardized questions that explore a specific topic and collect information about demographics,

opinions, attitudes, or behaviors. The primary data required for the purpose of the study has been collected with the help of a self-designed instrument comprising of 40+ questions.

6.3 Sampling Technique:

- **Sampling Unit:** Nashik District (Both Nashik City- MNC and Rural Areas)
- **Sampling Technique:** The samples are selected through **Simple Random sampling method.**

a) Sample Size:

- Sales Executives = 310
- Milk Consumers = 1050
- Dairy Chairpersons = 40
- Total = 1400

b) The Population

The sample design starts with defining the universe is also called as population under study. The present research has been carried out with education sector and the allied business schools. The population under study comprised of Sales Executives, Milk Consumers and Dairy Chairpersons. The population size therefore is 1400.

6.4 Sampling Unit

Data has been collected from the milk dairy sector especially in Nashik district. Both private and cooperative dairies were considered for the study. Hence, Nashik district remains the sampling unit for present study.

6.5 Sampling Technique

The sampling technique involved a concrete plan for obtaining a sample from a given population. It is the procedure that the researcher adopted in selecting a sample. The Simple Random Sampling Method is used within the area covered for the survey. Such type of sampling is also called 'chance sampling' wherein each and every item in the population has an equal chance of inclusion in the sample and each one of the possible samples, in case of finite universe, has the same probability of being selected.

7. DATA ANALYSIS

The qualitative approach is followed in the present study. Both primary and secondary data is included in the study. The secondary data has been collected from reports, journals, newspapers and website. The appropriate labels, coding are given to the charts, graphs and figures. Data analysis and interpretation has been done on the basis of data collected through education sector in golden triangle. The researcher analyzed the close ended responses first, tabulated and quantified them for analysis. This was done by writing all the key things in a systematic order, as is done in a questionnaire planning/designing.

The analysis was done descriptive and interpreted through simple tabulations, percentages methods & chi-square test. After collection of primary and secondary data, appropriate and most suitable statistical tools and techniques are used for the analysis of data i.e. percentage, averages, chi-square test. For the analysis and interpretation of data following tools and methods are used;

- Tabulation
- Classification
- Percentage & Chi Square Test
- Graphs
- Charts

8. SCOPE & LIMITATIONS OF THE STUDY

Globalization paved the way to foreign players to enter the Indian marketplace. The recent report on Foreign Trade Statistics of 2004 revealed that the imports of dairy products (milk and cream) has reached to around 22.145 million tonnes between April and March 2004 against 1473 million tonnes for the same period in the year 2003. The main reasons for sharp rise in imports are huge export subsidies given by developed countries (mainly the US and EU). This increase has indicated that there is some growth potential for dairy products in India and Maharashtra consecutively (Deaton & Dreze, 2009).

• Limitations for the study:

This study is limited to selected sample size and respondents. The study had a wide scope. The study majorly focused on

1. Marketing efficiency analysis,
2. Private and Cooperative milk dairies
3. Core and by-products of milk in Nashik district

The marketing efficiency is analyzed in relation with the production and distribution of private and cooperative milk dairies. Certain criteria are applicable while choosing the dairy such as turnover, milk collection capacity, number of employed, official registration etc. The market area is restricted to Nashik district. The study is restricted to the time period starting from 2010 to 2019. Geographically, it is limited to Nashik District for the present research. But the researcher has tried at his best level to collect excessive and qualitative statistical data for the study.

9. REVIEW OF LITERATURE

Unitus Capital has published a **report** entitled "A Dairy Sector Investment Report" in 2017. It states that Indian dairy market has lucrative and immense opportunities in the years to come. The report has shared the insights about the challenges, opportunities, key trends, and investors' perceptions about Indian dairy industry. It is estimated that the Indian dairy industry is expected to grow with an average 16% rate and will reach to the overall turnover of US\$ 155 Billion in the first quarter of 2020. The liquid milk is sold with the highest share with 58% as the core product in the domestic market.

Ms. Amruta Pawar (2014) in her M.Phil. **Thesis** on "The Study of Effectiveness of Online Marketing on Integrated Marketing Communication" has discussed the various tools used in the integrated marketing communication such as advertising, sale promotion, public relations and personal selling. They are coined with the online advertising such as displays, web-banners, floating ads, expanding ads, frame ads, search engine optimization (SEO), search engine marketing (SEM), and mobile and email marketing.

Krishnaiah and Rajashekhar (2012:374) in their **research article** on "**Trends in Management of Technology (MOT) Practices in Small and Medium Enterprises (SMEs) in India: A Study of Select Food Processing Enterprises**" made an attempt to establish the relationship between the ever-increasing use of technology for efficiency and effectiveness of SMEs in Indian business context. This is with reference to food-processing sector. The study was carried out in the state of Andhra Pradesh to review the scope of technology management for optimum utilization of SME resources.

Philip Kotler in his famous **book** named "**Marketing, Management and Millennium Edition**" expressed notable views on the changing role of marketers in the 21st century. He has classified the task of marketing at three different stages: Entrepreneurial Marketing, Formulated Marketing and Intreprenurial Marketing. The effective marketing strategy can be in multiple forms and types. Kotler has further explained that there are total 10 entities which define the scope of marketing. They are: ideas, information, properties, people, places, experiences, goods, services, events and organizations. He underlines the nature by calling the term 'marketing' as a social process. Pricing, promotion, distribution, targeting, positioning and segmentation. He did mention the concept of 'metamarket'

proposed by the Mohan Sawhney which club the products and services together. It is based on the cost-benefit analysis.

10. Chapter Scheme:

- Chapter 1: Introduction
- Chapter 2: Conceptual Framework
- Chapter 3: Review of Literature
- Chapter 4: Research Methodology
- Chapter 5: Data Analysis and Interpretation
- Chapter 6: Finding, Recommendations and Conclusions

Appendix

- a. Questionnaire
- b. Bibliography

In this section, a description of the whole study has been provided, also describing briefly the content of each chapter of the thesis. The structure of the thesis is as follows.

Chapter 1: Introduction

This chapter includes the brief overview of research problem, topic of study, need for study/significance of the research, and provides the brief introduction to all the concepts, and industrial area under study. It deals with the introduction, rationale of the study and the statement of the research problem.

Chapter 2: Conceptual Framework

This chapter includes the research statement, hypotheses, scope of the research, sample design, sources of information, and structure of the study with sound justifications/explanations. A review of the relevant literature showing the work done previously in the area of proposed research is essential to plan further research effectively. The information given in the review should be supported by references. The review of literature helps to understand the importance, background and present situation related to the subject selected for the research work. Therefore it is necessary to review relevant and literature related to the subject manner. It is important to provide this for undertaking the proposed research, perhaps in the light of previous work done. It should be possible in most cases to anticipate the specific and general benefits likely to be achieved as a result of completion of the proposed research.

List of Dairy Profiles:

The following dairies are covered in the survey for present study.

Sr. No.	Name of the Dairies in Nashik District
1	Aarey Milk Dairy (Government of Maharashtra Dairy Development Department)
2	Mahananda Dairy [Maharashtra Rajya Sahakari Dudh Mahasangh Maryadit]
3	Gokul [Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd.,]
4	Rajhans [Sangamner Taluka Sahakari Dudh Utpadak and Prakriya Sangh Ltd., Sangamner]
5	Warana Milk And Milk Products Ltd
6	Prabhat Dairy Ltd.
7	Satral Milk Dairy
8	Nashik Jilha Sahkari Doodh Utpadak Sangh, Nashik
9	Morgan Milk & Dairy Industries Pvt. Ltd

10	Dairy Power Ltd.
11	Mother Dairy Fruit & Vegetable Pvt. Ltd
12	Amul Milk Dairy [Kaira District Co-operative Milk Producers' Union Ltd]
13	Gagangiri Milk [S. R. Thorat Milk Products Pvt. Ltd.]
14	Atul Dairy & Milk Products
15	Amrut Dudh Private Limited
16	Sarda Farms
17	Godavari Dairy. [Godavari Khore Namdeoraoji Parjane Patil Taluka Sahakari Dudh Utpadak Sangh Ltd]
18	Pande Mithai
19	Sinnar Taluka Sahakari Dudh Utpadak & Prakriya Sangh Ltd.
20	Radhe Krishna Dairy Farm
21	Amrut Pure Gir Cow Milk
22	Katraj Dairy [Pune Zilla Sahakari Dudh Utpadak Sangh Maryadit]
23	Mahananda Godavari Milk Dairy
24	Shree Nasik Panchvati Panjrapole
25	JS Dudh Dairy
26	Shree Swami Samarth Milk Center
27	Kadam Dudh Dairy
28	Khatib Dairy Farm
29	Vaishnavi Dairy & sweets
30	Chaitanya Milk Products Private Limited
31	Gurukrupa Dairy Farm
32	Punjab Sind Dairy Products Pvt. Ltd
33	Swaraj Milk And Milk Products
34	Dairy Don and Sons
35	Gopi Milk Products Pvt Ltd.
36	Indapur Dairy & Milk Products Pvt. Ltd. [SONAI DOODH]
37	Mula Agro Products Pvt. Ltd. [Mauli Milk]
38	Sai Girna Multistate Cooperative Dudh Utpadak & Prakriya Society Ltd.
39	Deogaon Farms Ltd.
40	Devang Dairy

Chapter 3: Review of Literature

In order to create the solid foundation, understand the recent developments and evolution in the relevance of topic, various resources are reviewed by the researcher. They include books, theses, dissertations, working papers, research articles, blogs, magazines, blogs, industry reports etc.

Chapter 4: Research Methodology

This chapter includes the research design, approach, method, sampling method, technique, data collection, and other details which are mandatory as per the guidelines of academic research.

Chapter 5: Data Analysis and Interpretation

Three exclusive surveys conducted with the help of questionnaires prepared for sales executives, milk consumers and dairy chairpersons as a part of primary data while various databases, industry reports, published surveys are referred as secondary data. Both are presented in a graphical manner with labeling.

Chapter 6: Finding, Recommendations, Suggestion and Conclusion

Post-analysis, the researcher has worked on the key research findings and given recommendations and suggestions based on the study.

Appendix

- a) Questionnaires
- b) Bibliography

11. FINDINGS:

In the present study, the researcher has drawn conclusions based on findings and suggestions and recommendations were given accordingly. This chapter aims to provide a brief overview of the specific attempts, in terms of the extent to which the various objectives of the present research study have been accomplished and whether the hypotheses are proven to be correct.

1. There are 60% private milk dairies, 32.50% cooperative and 7.50% government-linked milk dairies as per survey inputs in the Nashik district at present. The share of private players is more than other types of dairies.
2. 54.52% milk dairies have an exclusive marketing team who have scientific and systematic knowledge of marketing tools, techniques, and who can understand the cascading impact of same on the sales and distribution of milk products. The remaining 45.48% need to either develop their existing staff through training, workshops and other methods or review the recruitment policy to ensure the efficiency of marketing (Ref. TABLE NO 5. 1.7).
3. The 'standard milk' as 'core milk product' and 'buttermilk' as the 'milk by-product' have the highest while 'full-cream milk' and 'ghee' as lowest demand respectively in the Nashik district at present whereas based on the survey responses received (Ref. 1.12 & 1.13)
4. The 'standard milk' as 'core milk product' and 'buttermilk' as the 'milk by-product' have the highest while 'full-cream milk' and 'ghee' as lowest demand respectively in the Nashik district at present whereas based on the survey responses received (Ref. 1.12 & 1.13)
5. 88.39% sales force believes that there is huge potential to make use of technology not only in the production and distribution of milk products but also at all levels. The sky is the limit.
6. Cooperative dairy is preferred by 29.14% milk consumers while private dairy is the first choice of 54.29% consumers in majority. Moreover, 16.57% of total consider that government-linked dairies are good.

12. RECOMMENDATIONS

Following recommendations are made by the researcher in case of this study:

- 1) There is direct relationship between the distribution channels and marketing efficiency of milk products in Nashik District. Therefore, dairy plants of co-operative and private sectors should accept various distribution channels like social media, reference groups etc. on the line of marketing.
- 2) The Just In Time Technique, GPRS system, PERT Technique, Critical Path Method (CPM), Decision Support Systems (DSS) model can be applied. In addition, the tools like Gantt chart can be used for project management. More number of refrigerated vehicles should be increased to maintain the freshness, quality and temperature of milk products since they are perishable by nature. In case of limited budget, they can be hired on rent at the moment. This would save the cost as well as increase the chances of durability of milk products (Ref. TABLE NO 5.1.20).
- 3) Digital marketing, affiliate marketing, micro marketing, product reviews are some sub-areas of social media. They can be optimized depending on the goals of organization (Ref. TABLE NO 5.1.26).
- 4) The dairies should shift their focus on something like credit points, cashback, discounts on repetitive purchase of products etc. in the time to come (Ref. TABLE NO 5.1.27).

- 5) It is recommended that Nashik milk dairies should increase the use of online tools and platforms to scale up the product information, event updates, promotion etc. It has several reasons: they are more habitual to access social media and other digital platforms. The online advertisements are more creative, animated, eye-catching and have more recalling value also (Ref. TABLE NO 5.2.21 and TABLE NO 5.2.23).
- 6) The percentage of online mode of payment can be increased up to 50%. Credit points can be given to those who are regular buyers (Ref. TABLE NO 5.2.43).

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