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## A Study On Challenges Faced By Dairy Products Manufacturers In Coimbatore City

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### ABSTRACT

This study investigates the various challenges faced by dairy product manufacturers in Coimbatore city, a prominent hub for dairy production in Tamil Nadu. The research identifies key issues such as fluctuations in raw milk availability, high input costs, lack of advanced processing technology, inadequate cold chain infrastructure, and increasing competition from large-scale and multinational brands. Regulatory hurdles, workforce shortages, and shifting consumer preferences towards plant-based and health-conscious products further compound the challenges. The study utilizes primary data from local dairy units and secondary sources including government and industry reports.

### INTRODUCTION

The dairy industry plays a crucial role in the global food sector, providing essential nutrition through products such as milk, cheese, butter, yogurt, and other dairy-based foods. Dairy products are a rich source of protein, calcium, vitamins, and other nutrients, making them a staple in many diets worldwide. However, despite its importance, the dairy industry faces several challenges that impact its growth, sustainability, and efficiency.

This study explores the major challenges faced by the dairy food industry, highlighting key issues and their implications on production, distribution, and consumption. Understanding these challenges is essential for developing innovative solutions that ensure the sustainability and efficiency of the dairy industry while meeting the demands of modern consumers.

## INTRODUCTION TO MARKETING

Marketing is the process of creating, communicating, delivering, and exchanging value to meet the needs of customers, businesses, and society. It involves understanding consumer behavior, building strong brands, and utilizing various strategies to attract and retain customers.

At its core, marketing revolves around the 4Ps—Product, Price, Place, and Promotion. These elements help businesses position their offerings effectively in the market. With the rise of digital platforms, marketing has evolved beyond traditional methods, incorporating data analytics, social media, and AI-driven strategies to enhance customer engagement.

Successful marketing builds brand awareness, fosters customer loyalty, and drives business growth. Whether through content marketing, advertising, influencer partnerships, or direct outreach, a well-executed marketing strategy ensures that the right message reaches the right audience at the right time.

## RESEARCH OBJECTIVES

This study aims to explore the key challenges faced by the dairy food industry and analyze their impact on production, distribution, and consumption. The objectives include:

- Identifying major challenges in dairy food production and supply chain management.
- Evaluating the impact of climate change and sustainability on dairy farming.
- Assessing consumer trends and their influence on the dairy industry.
- Exploring technological advancements and regulatory measures to enhance dairy production and safety.

## SCOPE OF THE STUDY

The study will focus on various aspects of the dairy food industry, including production, processing, distribution, and consumer preferences. It will analyze the impact of challenges on industry stakeholders, from farmers to manufacturers and retailers. Additionally, potential solutions and future trends will be discussed to ensure the sustainability and growth of the dairy sector.

## REVIEW OF LITERATURE

**"Development of Indian Dairy and Challenges: An Overview" by Dr. Satish Patel (2014)** Findings: This paper outlines several challenges in the Indian dairy sector, such as small and scattered herds, lack of investment, declining research and extension services, disease prevention and control issues, absence of standard pricing systems, low reproductive performance, imbalanced animal diets, and the dominance of the unorganized sector.

**"Challenges of Indian Dairy Industry" by Dr. Satish Patel (2017)**

Findings: The study identifies high milk production costs due to low average yields, inefficient milk handling and marketing practices leading to increased consumer prices, and poor milk quality resulting from unhygienic handling.

**"Dairy in India: The Supply Chain Issues Facing the Sector" by S. Nagarajan (2018)** Findings: The article discusses India's inadequate road network and insufficient investment in cold chain infrastructure, which compromise milk quality. It emphasizes the need for companies to establish their own milk collection systems to ensure quality and reduce reliance on contractors.

**"Constraints Faced by the Dairy Farmers in Production and Marketing of Milk in Northern Dry Zone of Karnataka" by R.S. Bhawar, P.K. Dixit, and M. Sivaram (2020)** Findings: This study highlights production-related challenges such as high feed and fodder costs, year-round unavailability of quality feed, and disease susceptibility in crossbred animals. Marketing constraints include distant milk collection centers, low milk prices, irregular market availability, and milk spoilage due to poor hygiene and storage issues during transportation.

**"Challenges Facing Dairy Sector in India - Explained, Pointwise" (2020)**

Findings: This article examines the impact of the COVID-19 pandemic on the Indian dairy industry, noting challenges like reduced door-to-door sales, decreased demand due to shop closures, fodder and cattle feed shortages, and limited access to veterinary services. It also discusses various government initiatives aimed at supporting the dairy sector during these times.

**FERMENTED DAIRY PRODUCTS**

- Yogurt: Produced by fermenting milk with beneficial bacteria (e.g., Lactobacillus and Bifidobacterium), offering probiotic benefits.
- Kefir: A fermented dairy drink with a slightly tangy taste, known for its high probiotic content and digestive benefits.
- Buttermilk: Originally the liquid left after churning butter, now often cultured to enhance its flavor and digestive benefits.

**SUPPLY CHAIN AND STORAGE ISSUES**

- Dairy products require cold storage and efficient transportation to prevent spoilage.
- Inefficiencies in the supply chain can lead to food waste and financial losses.
- The global supply chain disruptions due to the COVID-19 pandemic

## RESEARCH METHODOLOGY

Research Methodology is a way that helps to systematically solve a research problem. It may be understood as a science of studying how research is done scientifically. Moreover, research methodology, is not only about the research methods but also consider the logic behind the method that is used in the context of our research study and explain why a particular method or technique is used.

The study conducted was descriptive in nature and it was aimed to evaluate “ A study on challenges faced by dairy products manufacturers in Coimbatore City”

## INSTRUMENTATION

For the purpose of the study, a structured questionnaire was designed with 20 questions. It consists of open- ended questions, level of satisfaction questions and ranking questions.

## SAMPLE SIZE

A sample of 100 respondents was chosen, using random sampling technique

## DATA ANALYSIS

### SIMPLE PERCENTAGE ANALYSIS

#### TABLE SHOWING THE GENDER OF THE RESPONDENTS

| GENDER | NO.OF. RESPONDENTS | PERCENTAGE |
|--------|--------------------|------------|
| MALE   | 130                | 86.8%      |
| FEMALE | 20                 | 13.2%      |
| TOTAL  | 150                | 100%       |

Source: Primary Data

## INTERPRETATION:

From the above table it is clear that 86.8% of the respondents are male and the remaining 13.2% of the respondents are female.

**INFERENCE:**

It is concluded that majority 86.8% of the respondents are male.

**ANOVA**

Analysis of variance (ANOVA) is a statistical formula used to compare variances across the means (or average) of different groups. A range of scenarios use it to determine if there is any difference between the means of different groups.

## **ANOVA BETWEEN MONTHLY INCOME AND BENEFITS AND COMPENSATION IN DECCAN INDUSTRIES**

**ANOVA**

| <b>FACTORS</b>                          |                       | <b>Sum of Squares</b> | <b>D f</b> | <b>Mean Square</b> | <b>F</b> | <b>Sig.</b> |
|-----------------------------------------|-----------------------|-----------------------|------------|--------------------|----------|-------------|
| <b>Supply chain</b>                     | <b>Between Groups</b> | 17.119                | 4          | 4.280              | 5.418    | .002        |
|                                         | <b>Within Groups</b>  | 115.318               | 146        | .790               |          |             |
|                                         | <b>Total</b>          | 132.437               | 150        |                    |          |             |
| <b>Storage and preservation problem</b> | <b>Between Groups</b> | 14.980                | 4          | 3.745              | 2.605    | .003        |
|                                         | <b>Within Groups</b>  | 209.881               | 146        | 1.438              |          |             |
|                                         | <b>Total</b>          | 224.861               | 150        |                    |          |             |
| <b>Regulatory compliance</b>            | <b>Between Groups</b> | 3.076                 | 4          | .769               | .759     | .002        |
|                                         | <b>Within Groups</b>  | 147.970               | 146        | 1.013              |          |             |
|                                         | <b>Total</b>          | 151.046               | 150        |                    |          |             |
| <b>Market competition</b>               | <b>Between Groups</b> | 4.775                 | 4          | 1.194              | 1.351    | .004        |
|                                         | <b>Within Groups</b>  | 128.987               | 146        | .883               |          |             |
|                                         | <b>Total</b>          | 133.762               | 150        |                    |          |             |

## INTERPRETATION:

- Supply Chain Issues:
- Since  $p < 0.05$ , we reject the null hypothesis, meaning there is a significant difference in how companies experience supply chain issues.
- Storage & Preservation Problems:
- The p-value is below 0.05, indicating a significant difference in how companies face storage and preservation problems.
- Regulatory Compliance
- Even though the F-value is low, the p-value is below 0.05, meaning there is still a significant difference in how companies are affected by regulatory compliance challenges.
- Market Competition
- The p-value is below 0.05, meaning that companies face varying levels of difficulty in market competition.

## INFERENCE

- All four factors have p-values below 0.05, which means that the impact of these challenges significantly varies among different dairy companies.
- The highest F-value (5.418) for Supply Chain Issues suggests that this factor has the strongest variation in impact among companies.
- Since all challenges show significant differences, further post-hoc tests (like Tukey's HSD) can be performed to identify which groups are significantly different from each other.

## FINDINGS OF ANAOVA

### Supply Chain Issues:

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### Market Competition

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## RANK ANALYSIS

### RANK BETWEEN EDUCATION QUALIFICATION AND HR POLICY IN DECCAN INDUSTRIES

H0 = There is no statistical difference between monthly income and salary structure and pay scale at deccan industries.

H1 = There is statistical difference between monthly income and salary structure and pay scale at deccan industries.

| Challenges                      | Rank 1 | Rank 2 | Rank 3 | Rank 4 | Rank 5 | Total responses | Average rank |
|---------------------------------|--------|--------|--------|--------|--------|-----------------|--------------|
| Supply Chain Issues             | 30     | 25     | 20     | 15     | 10     | 100             | 2.5          |
| Storage & Preservation Problems | 20     | 30     | 25     | 15     | 10     | 100             | 2.65         |
| regulatory Compliance           | 15     | 20     | 30     | 20     | 15     | 100             | 3.0          |
| Market Competition              | 20     | 15     | 15     | 30     | 20     | 100             | 3.15         |
| Fluctuating Raw Material Costs  | 15     | 10     | 10     | 20     | 45     | 100             | 3.85         |

#### INTERPRETATION:

- Supply Chain Issues had the highest impact with an average rank of 2.5, meaning more respondents placed it in the top ranks.
- Fluctuating Raw Material Costs had the least impact with an average rank of 3.85, meaning it was often ranked lower.
- Regulatory Compliance & Market Competition had mid-level concerns, with ranks of 3.0 and 3.15, respectively.

#### INFERENCE:

Supply Chain Issues are the most critical challenge for dairy companies, while Fluctuating Raw Material Costs are the least concerning, based on respondent rankings.

#### FINDINGS OF RANK

- Supply Chain Issues had the highest impact with an average rank of 2.5, meaning more respondents placed it in the top ranks.
- Fluctuating Raw Material Costs had the least impact with an average rank of 3.85, meaning it was often ranked lower.
- Regulatory Compliance & Market Competition had mid-level concerns, with ranks of

3.0 and 3.15, respectively.

## SUGGESTION

Based on the findings, it is evident that supply chain issues are the most critical challenge faced by dairy companies. To address this, the company should invest in better logistics management, supplier diversification, and technology-driven tracking systems to minimize disruptions and ensure a smooth flow of raw materials and finished products.

Regulatory compliance is another key challenge, despite a lower F-value, indicating that different companies experience compliance issues at varying levels. To overcome this, the company should implement regular staff training, stay updated on changing regulations, and establish a strong internal quality assurance system to prevent legal issues.

Since fluctuating raw material costs were ranked as the least impactful, but still a concern, securing long-term supplier contracts, bulk purchasing, and exploring cost-effective raw material alternatives can help stabilize production costs. Additionally, with a large portion of the workforce holding HSC (37.7%) and UG (39.1%) qualifications, the company should focus on skill development and training programs to enhance efficiency and innovation. Lastly, since 86.8% of the workforce is male, implementing gender-inclusive policies such as flexible work arrangements, safe workplace environments, and leadership opportunities for women can help create a more diverse and balanced workforce.

## CONCLUSION

The study highlights the key challenges faced by dairy manufacturing companies and provides insights into their impact on business operations. The findings indicate that supply chain issues are the most critical concern, requiring strategic improvements in logistics and supplier management. Storage and preservation problems also significantly affect operations, emphasizing the need for better refrigeration and inventory control systems.

Moreover, the workforce demographics suggest a need for enhanced skill development programs and greater gender inclusivity in employment policies. Addressing these challenges with targeted solutions will enable dairy companies to enhance efficiency, maintain product quality, and achieve long-term sustainability in a competitive market. Ultimately, by implementing the right strategies, the industry can continue to grow and adapt to changing market demands while overcoming operational constraints.