

Researching the Supply Chain Management Practices of Mother Dairy and Similar Cooperatives

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ABSTRACT

This report delves into the supply chain management (SCM) tactics used by dairy cooperatives by looking at the famous Mother Dairy as an example and other comparable organisations in the dairy industry. From sourcing raw materials to delivering completed goods to clients, these cooperatives employ intricate strategies and systems that will hopefully be better understood by our research. A comprehensive investigation is used to accomplish this. The study begins with an introduction that explores the background, organisation, and primary objectives of Mother Dairy and similar cooperatives. Distributors, retailers, processors, cooperatives, and farmers are just a few of the many participants outlined in the next section, which delves into the supply chain architecture. After that, the study dives into the sourcing and procurement procedures of these cooperatives, shedding light on their price structures, quality standards, and farmer assistance programmes. Two environmental initiatives that stand out and show their commitment to ethical sourcing are organic farming and fair trade procedures. The study also contrasts and analyses the processing and manufacturing methods used by Mother Dairy and its rivals, paying special attention to the ways in which each company handles quality control, keeps up with technological advances, and follows all applicable regulations. While enhancing production efficiency, it explores new methods of thinking about the safety and homogeneity of dairy products. Quality control procedures and compliance frameworks guarantee that products are safe for use and in accordance with all applicable regulations. We also investigate how information systems and technology play an essential role in enhancing supply chain transparency, collaboration, and decision-making. We look into Mother Dairy's collaborations with other organisations to determine their impact on supply chain efficiency, social responsibility, and sustainability. Nonprofits, government agencies, and agricultural cooperatives are all examples of such groups. In its last section, the study details the challenges faced by dairy cooperatives and the opportunities that lie ahead for the management of the supply chain for dairy products. Policymakers and practitioners in the field will find this smart perspective very helpful.

Keywords: Supply chain management, dairy cooperatives, Mother Dairy, sourcing practices, sustainability, logistics, inventory management, technology, collaboration, challenges, opportunities..

INTRODUCTION

India, previously afflicted by persistent milk shortages, has suddenly emerged as the foremost milk producer globally, with production nearing 100 million tonnes. Global entrepreneurs have ample opportunities to capitalize on one of the largest and quickly growing industries for milk and milk products. The milk market that operates with high efficiency is mainly confined to urban areas, where over 25 percent of the country's population lives. It represents the highest standard or most perfect example of the global dairy industry. Global entrepreneurs have ample opportunities to profit from one of the major and rapidly growing sectors in

the dairy industry for milk and milk products. India offers numerous lucrative opportunities for international dairy processors. The Indian dairy business is experiencing significant growth as it endeavors to keep pace with the swift advancements occurring worldwide. The milk market that achieves success and intended outcomes is predominantly confined to metropolitan areas, which accommodate over 25 percent of the country's population. Roughly 50% of the total milk production is consumed within the country. By the end of 2008, it is estimated that the urban population would increase by around 105 million, reaching a total of 884 million in 2009. This is a growth rate of almost 40 percent. The projected surge

in the urban population will significantly enhance the prospects of the dairy business in India. Presently, the market is being catered to by both the cooperative and private sectors in the organized sector, as well as the traditional sector.

NEED FOR THE STUDY

Researchers, legislators, industry players, and consumers all have a vested interest in how cooperatives like Mother Dairy apply supply chain management tactics. Here are a few reasons why this kind of investigation is absolutely necessary. To learn everything there is to know about the dairy industry, how to promote sustainability, how to guide policy-making, and how to expand cooperative models, it is essential to study Mother Dairy's and similar cooperatives' supply chain management practices in detail.

Insights into the operational dynamics of dairy cooperatives can be provided by the study, which can help stakeholders and participants in the industry understand the challenges and opportunities in the sector. By analyzing the supply chain techniques used by successful cooperatives like Mother Dairy, we may find the best practices that other businesses in the industry can follow, leading to overall improvement. The findings can be utilized by policymakers to create policies that support the growth and sustainability of dairy cooperatives. Insight into effective strategies can direct the establishment of regulatory frameworks that promote fair trade, environmental sustainability, and farmer support. You can tell how sustainable the dairy sector is for society and the environment by looking at how they handle the supply chain. Given that both customers and investors are increasingly concerned about the impact on the environment and social responsibility, this is more important than ever before. By providing concrete examples of dairy supply chain management, this study can improve scholarly research. Researches can use this data to build theories, models, and frameworks about cooperative supply chain management.

Studying the supply chain strategies of successful cooperatives, dairy companies can gain a competitive advantage. With this information, we can cut costs,

simplify processes, and boost efficiency. More and more, shoppers want to know where their goods came from and how they were made. Customers' faith in dairy cooperatives can be strengthened by learning about their supply chain tactics. Those looking to invest or lend money to the dairy industry could use the study's results as a basis for making smart decisions. In order to assess an investment's potential for long-term sustainability and profitability, it is crucial to have a thorough grasp of supply chain management techniques. Anyone interested in supply chain management, cooperative models, or agriculture will find this study useful as an instructional resource. It provides real-life examples for classroom use and discussion. Stakeholders in the dairy business can develop effective risk mitigation strategies by studying and understanding potential risks in the supply chain. Maintaining consistency and strength when confronted with unexpected challenges is crucial.

LITERATURE REVIEW

Annual output is reaching 100 million tonnes, becoming India the world's biggest milk producer despite long-term shortages. The milk and dairy products market is booming, and entrepreneurs from all over the world can take advantage of the many opportunities it offers. City dwellers account for over a quarter of the population and produce the bulk of the milk for the nation. This area consumes about half of the world's milk. The number of people residing in urban areas will reach 864 million by the end of 2007, an increase of more than 100 million—a surge of more than 40%. With more people moving to cities, India's dairy industry should do well. Presently, this market is being serviced by the traditional sector in addition to the cooperative and private sectors.

Mother Dairy intends to take advantage of the many opportunities that are currently available to the milk manufacturing industry as a whole. Mother Dairy - Delhi was founded in 1974 by Operation Flood. Present day shareholders include the National Dairy Development Board (NDDB). Mother Dairy gets all of the milk it needs in liquid form from dairy cooperatives. In order to get their produce, Mother Dairy also collaborates with organizations that

represent farmers and producers. Mother Dairy is helping the oilseeds grower cooperatives that make and package the Dhara edible oil line by committing to sell all Dhara goods countrywide. The three pillars of successful marketing—affordability, acceptability, and availability—have already been attained by Mother Dairy. Being that it is, being well-received requires zero work. The availability of milk is not a concern either, because there is ample space to increase production despite the present low yields from dairy animals. As a last and most crucial marketing consideration, we have price. What can we do to make milk more affordable so that everyone can buy it? The heart of the matter is that. Based on current ideas of strategy and organization, Mother Dairy maximizes its multi-divisional structure and related diversity. This subject will be investigated using the theoretical framework of "strategy, structure and performance" in this study.

An Analysis of the INDIA Dairy Market Based on Buyer and Supplier Insights

The data presented here are from a survey of 314 urban families in the INDIA cities of Guangzhou, Beijing, and Shanghai. This survey was conducted in the fall of 2001 as part of a bigger study on the effects of shifting dynamics in Asian dairy markets on worldwide trade in dairy products. This study was funded by the United States Department of Agriculture (USDA), with the chief source of money being the NRICGP. The primary objectives of the study project were to collect information about the dairy market in key Asian countries and to estimate the demand equations for dairy products. Data obtained under these two objectives will be utilized in a policy simulation to assess the impact of trade reforms on Asian dairy markets.

Every year, the National Statistical Bureau (NSB) of China conducts surveys of both urban and rural households, collecting a wide range of demographic and expenditure data. For the most part, INDIA consumers have never bought dairy products, hence the NSB household surveys don't ask about their dairy spending. There is available NSB data for fresh milk, yoghurt, and milk powder, the three dairy products that

account for the bulk of INDIA consumers' spending. Rising disposable incomes and improved access to both domestic and foreign dairy goods have contributed to a meteoric rise in the kind and amount of dairy products purchased by urban INDIA consumers. The purpose of this article is to provide further information to the existing data from the NSB by outlining a survey that was carried out to gather data on the purchase of butter, cheese, and ice cream. There are a number of additional questions in the poll that may provide light on consumer demographics, purchasing patterns, and the advertising tactics that sway individuals to purchase dairy products.

STRATEGIC MANAGEMENT IN THE DAIRY SUPPLY CHAIN

The agricultural and food processing sector accounts for 12% of Argentina's GDP. Furthermore, it is a substantial labor component due to the fact that milk and its derivatives constitute a key economic engine in both urban and rural Argentina. In 2008, the dairy chain employed approximately 230,000 individuals, constituting 6.8% of the total employment in the agro-industrial sector (Llach, 2004). Cooperatives such as SANCOR sell 35% of the world's milk, according to Chaddad (2007). In 2006, Argentina produced 8,100,000,000 liters of milk, which accounted for 1.8% of the world's total (FAOSTAT, 2008). This put the country in the nineteenth spot worldwide.

The industry has placed far too much emphasis on the advantages of studying "productive chains" and their advantages and disadvantages. The Argentine dairy supply chain consists of the following links: R&D, production, intermediates, industry, traders, and end users (both domestic and international). According to experts and previous research, a lack of coordination in this chain is indicated by high opportunistic scenarios, which include moral hazard, restricted rationality, and institutional or organizational uncertainties.

Building supply chains that include small farmers is crucial to the development of the sector. It is just as important to study the value creation process at each step of the value chain, as it is to study the sales channels of different products, including the assets and

people involved. The value chain as a whole would reap the rewards of this.

The coordination of chains has received very little attention in the many systematic studies that have focused on the Argentine dairy industry. New methods for coordinating public policy and innovative approaches to intra- and inter-level collective actions could emerge from this kind of research.

This study seeks to offer a thorough analysis of Argentina's dairy business in order to gain a better understanding of the strategic management problems encountered by the country's supply-chain for dairy products. Improving the dairy supply chain also requires identifying important problems to fix.

RESEARCH METHODOLOGY

To understand the relationship between the mother dairy and its distributors, I conducted a small survey. As in any supply chain, the distributors play a major role; these are the people who actually interact with the customer and understand their requirements. Distributors convey to the company about the future demand on that basis, the company schedules its operations. Poor relationship with the distributors may cause huge loss to the company, not only in monetary terms but also may spoil the company's image. Following is the structure of my survey:

Research Design

Descriptive research is used to obtain information concerning the current status of the phenomena to describe "what exists" with respect to variables or conditions in a situation. The methods involve range from the survey which describes the status quo, the correlation study which investigates the relationship between variables, to developmental studies which seek to determine changes over time.

Sample size

I surveyed 25 mother dairy dealers in Noida only. The reason for choosing Noida was first my convenience

and second I wanted to know if there any difference exists between the booths in Delhi and in Noida.

Tool used

First I designed a questionnaire (please see Annexure) from dealer's point of view and through which I have tried to know the satisfaction level of dealers with the mother dairy. As it was not easy to get the information from the dealers as they were looking at with suspicion. I tried to keep the questionnaire small and simple where only 11 questions to be answered by the respondents.

OBJECTIVE OF THE STUDY

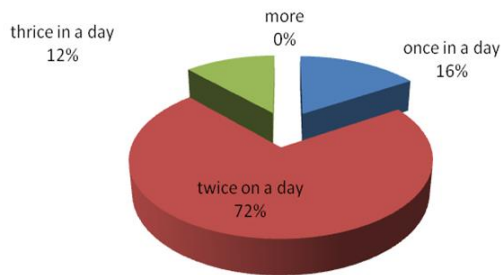
To know how does mother dairy manage its supply chain in terms of its various aspects like suppliers, distributors, inventory, warehousing, transportation etc.

- ✓ To find out how can be mother dairy more effective by using latest technology in its supply chain.
- ✓ Mother dairy, New Delhi is one of the biggest plant in Asia and it fulfills the major milk and milk products requirement of Delhi and NCR
- ✓ It has the wide network of distribution in Delhi and NCR region
- ✓ It has huge requirement of raw milk every day and the study of its supply chain will help to know how company manage its suppliers
- ✓ Only mother dairy has got best productivity award three times in a row, so no other dairy plant can be better than mother dairy to study for its supply chain.

ANALYSIS

1. What is the frequency of milk and milk product supply from Mother Dairy during the day?

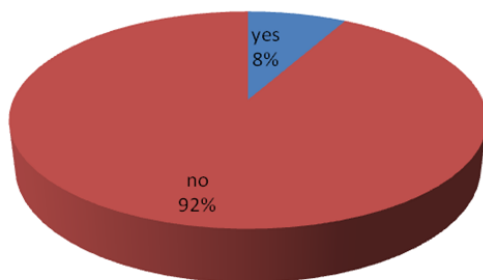
Dealers' opinion on frequency of milk and milk product supply from Mother Dairy during the day



Two times a day is the typical supply frequency, according to most dealers, but they can acquire more if demand is high. For example, during a holiday season, the supply frequency can reach three times each day. When milk and milk products are delivered on time, it helps the mother dairy obtain more satisfied customers.

2. Does mother Dairy provides proper cooling systems?

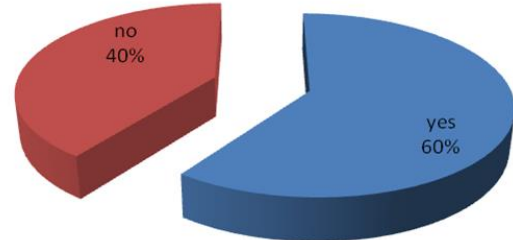
Dealers' opinion on mother Dairy provides proper cooling systems



The cooling systems supplied by the mother dairy have been deemed satisfactory by the majority of the merchants. Because milk and milk products must be kept at the correct temperature (4 ° C) to ensure their safety, it is beneficial for dealers to maintain a larger inventory. The fact that it was available at all hours was a huge boon to mother dairy.

3. Does mother dairy provides proper maintenance and training for booths?

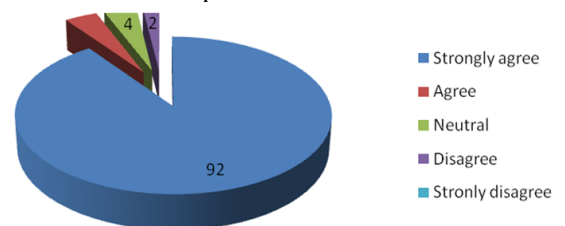
Dealers' opinion on mother dairy provides proper maintenance and training for booths



Among the dealers surveyed, 60% reported receiving regular booth maintenance and training. However, 40% of the population does not have access to this service. It could be because the mother dairy sorts the booths according to their daily sales, and the ones with the highest sales get perks like free training and maintenance from the corporation.

4. Are the dealers satisfied with the packaging of the products?

Dealers' opinion on satisfied with the packaging of the products



When asked about the packaging of milk and milk products, 92% of dealers expressed extreme satisfaction. Unloading the truck onto booths ensures that the carets containing the milk and milk product pouches are handled correctly and do not spill. Dealers may rest assured that they are receiving high-quality, freshly-made goods from the mother dairy when it is packaged properly. Even a high-quality product with subpar packaging will leave a negative impression.

CONCLUSIONS

The study of supply chain management practices in dairy cooperatives like Mother Dairy and similar entities holds immense significance in the context of global agriculture, sustainable development, and food security. Through a comprehensive examination of the complexities, challenges, and opportunities inherent in dairy supply chains, this research endeavors to inform and advance practices that drive efficiency, resilience, and inclusivity within the dairy sector. The research has unearthed a plethora of insights into the supply chain management practices of dairy cooperatives, shedding light on diverse aspects ranging from sourcing and procurement to distribution, logistics, and technology adoption. Key findings include the pivotal role of smallholder farmers in cooperative enterprises, the imperative of sustainability and resilience, the importance of collaboration and knowledge exchange, and the potential of digital technologies to transform supply chain operations. Central to the success of dairy cooperatives is the empowerment of smallholder farmers who constitute the backbone of these enterprises. By fostering inclusive business models, providing access to finance and technology, and promoting sustainable agricultural practices, cooperatives can enhance the livelihoods and resilience of farmers while ensuring a steady supply of high-quality milk for processing. Sustainability lies at the heart of dairy cooperatives' ethos, encompassing environmental stewardship, social responsibility, and economic viability. By embracing sustainable sourcing practices, reducing carbon emissions, and minimizing waste generation, cooperatives can contribute to mitigating the adverse impacts of dairy production on ecosystems and climate change, thereby safeguarding the long-term viability of the dairy sector. Collaboration among stakeholders is essential to addressing common challenges and seizing emerging opportunities within the dairy industry. Through partnerships with government agencies, research institutions, and civil society organizations, cooperatives can leverage collective expertise, resources, and networks to drive innovation, knowledge exchange, and capacity building across the supply chain. Digital technologies hold immense potential to

revolutionize supply chain management practices within dairy cooperatives. By adopting data analytics, Internet of Things (IoT), and blockchain solutions, cooperatives can enhance supply chain visibility, traceability, and transparency, enabling real-time monitoring, decision-making, and risk management. The findings of this research can serve as a catalyst for informing policy development, regulatory frameworks, and industry standards pertaining to dairy cooperatives. Policymakers can leverage research insights to formulate policies that support cooperative entrepreneurship, promote farmer welfare, and ensure food security. Practitioners within dairy cooperatives can draw upon best practices and lessons learned to optimize their supply chain operations, improve efficiency, and drive continuous improvement. Study of supply chain management practices in dairy cooperatives represents a critical endeavor with far-reaching implications for agricultural development, sustainability, and food system resilience. By advancing our understanding of cooperative entrepreneurship, fostering collaboration, and harnessing the transformative power of technology, we can chart a path towards a more inclusive, equitable, and sustainable dairy sector that benefits farmers, consumers, and society as a whole. Through concerted efforts and collective action, we can build resilient supply chains that withstand the test of time and contribute to a brighter future for generations to come.

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