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# **Supply chain management in diary industries – future scope and its importance** Panneerselvam Sivasankaran, A. Sivakumar, C. Subramanian, P. Chandru Deva Kannan

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# Supply chain management in diary industries – future scope and its importance

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Abstract: Supply networks are a major component of contemporary industrial systems. In its most basic form, supply chain management involves controlling the movement of materials and products from producers to consumers via an appropriate transportation network. The primary function of supply chain management is thought to be profitability. It aims to optimize the difference between what consumers pay and the cost of producing and delivering the product. Another goal is to strike the best possible balance between quality and manufacturing costs. From the source of raw materials to the final product reaching the client without delays, price increases, or subpar customer service, an efficient system is created through supply chain integration. This study aims to review the supply chain management of the dairy industry on a national and international scale by gathering fundamental data from credible publications worldwide. Time, cost, distance, and demand are the main key importance factors that are taken into consideration in this work for the dairy supply chain system.

# 1 Introduction

Managing the flow of milk from dairy farms, processing it when needed, and delivering it to final consumers is known as dairy supply chain management. A dairyman, dairymaid, dairy cattle, or dairy goat are examples of the animals and workers that support the manufacture of milk-based products, derivatives, and processes. A dairy factory transforms the milk from a dairy farm into a variety of dairy products. We are committed to working with farmers and suppliers to address the two primary challenges in dairy supply chains: greenhouse gas (GHG) emissions and animal welfare.

The globe is impacted by the trash produced by industrial processes and the excessive use of natural resources. The dairy business plays a significant role in the food and agriculture sectors and contributes significantly to the global economy. The industry produces, processes, and distributes a variety of dairy products, including milk, cheese, butter, and yogurt. India, the United States, China, Brazil, and Russia are the world's leading producers of dairy products (FAO, 2018).

India is the world's largest producer of buffalo milk, whereas the United States is the world's largest producer of cow milk. With about 30% of global dairy exports, New Zealand is a significant player in the dairy export market. From 522 million tons in 1986 to 798 million tonnes in

2016, milk production has grown by 53% worldwide over the past three decades (FAO, 2021). Since milk production makes up the majority of agricultural activity in India, the dairy industry is a significant economic sector. The industry employs millions of people and makes a substantial economic contribution to the nation.

India's dairy market is expected to reach INR 30,840 billion by 2027, from its 2018 valuation of INR 13,174 billion (Khanna et al., 2022). By 2023, 266.5 million metric tons of milk would be produced in India, according to the National Dairy Development Board (NDDB).

The states with the highest milk production are predicted to be Andhra Pradesh, Gujarat, Madhya Pradesh, Rajasthan, and Uttar Pradesh. A number of National Dairy Projects have also been put in place by the Indian government to meet the growing demands of Indian customers while increasing milk production, animal productivity, and ultimately farmer lives. Many factors, such as the use of non-scientific methods, poor cattle breeding, a disregard for quality standards, a lack of transparency, and—above all—a lack of adequate technological support, have contributed to the Indian dairy industry's slower-than-expected growth. These factors ultimately cause information asymmetry in the multilayer supply chain, endangering sustainability.

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To achieve better social, economic, and environmental performance, sustainability-oriented food supply chains combine forward (buying, producing, and distributing materials) and reverse (collecting and returning used products) operations (Paul et al., 2020). In addition, they emphasize the importance of using green energy instead of conventional energy for production and delivery.

"Green supply chain management" (GSCM) is the process of integrating environmentally friendly practices into all stages of the supply chain, from consumer product design to disposal at the end of its useful life. Supply Chain Management's goal is to minimize the supply chain's impact on the environment while maintaining or improving its financial performance. It addresses sustainable sourcing, energy-efficient transportation, product design, waste reduction, and environmental performance monitoring. GSCM strategies can assist companies by reducing costs, enhancing brand awareness, and complying with legal requirements. It can also help firms stay competitive by meeting the increasing demand for sustainable products and services. Sustainable supply chain practices are actions and activities that address the social, economic, and environmental aspects of manufacturing organizations (Kumar et al., 2022). Organizational performance has increased thanks to sustainable supply chain and logistics strategies (Sinha, 2022).

The dairy supply chain network framework model that has been proposed:

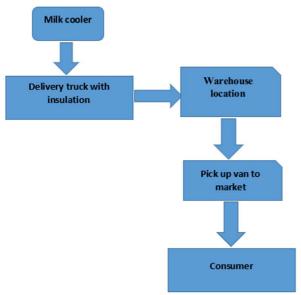


Figure 1 Model suggestion for the dairy supply chain network

The Figure 1 describes the model framework of diary supply chain operation which was shown in the graphical illustration.

In the present model the raw materials milk is taken from milk cooler or chiller plant from there it is taken to delivery truck with insulation. with the help of the insulation truck the raw materials is stored in warehouses.

From warehouse the raw materials were taken to various market collection point with the help of pick up van. Finally, the product was sold to consumer at right time in right place. Hence in this work the following main important factors taken into considerations such as time, cost, distance and demand for the commodities. attempt has been to solve mathematical model for dairy supply chain network using linear programming model.

#### 2 Literature review

Mohammad Shamsuddoha et al. [2023] The dairy industry makes a substantial contribution to the global food chain by providing essential nutrients for human consumption and creating jobs in rural areas. A family in Bangladesh can maintain their way of life with just a tiny dairy. Nonetheless, it is also connected to other environmental and social impacts, which makes it crucial for achieving sustainability. Simulation modeling and the system dynamics technique were used to build dairy supply chain networks and evaluate the data to find the best way to use the dairy waste produced on the farm. Therefore, the simulation model incorporates viewpoints on waste management and value addition to discover improved resource utilization and achieve sustainable results. In order to obtain further economic, social, and environmental benefits for the enterprise and the community, this study ends with a review of the simulation results and possible extensions [1].

**R.R. Pant et al. [2015]** In order to manage dairy supply chain networks, this article offers a framework for information flow, transparency, and traceability. Three different kinds of dairy supply chains that are typical in India are the subject of this case study-style research. Customers want assurances for food qualities and are growing more conscious of safety issues, new risks, and difficulties in the context of food products as a result of the increased emphasis on the food processing industries and the fact that processed food is now required rather than optional [2].

Farnaz Zarei-Kordshouli et al. [2023] In today's cutthroat marketplace, resilience tactics and sustainable growth are unquestionably important, particularly in light of the coronavirus outbreak. Therefore, this study creates a multi-phase framework for decision-making in order to examine the supply chain network design challenge while taking resilience and sustainability into account. Therefore, the potential suppliers' scores based on the sustainability and resilience components were calculated using the MADM technique. The proposed mathematical model's second step then used these scores as inputs to determine which provider should be selected [3].

Rajeev Kumar [2014] This study investigates the relationship between dairy supply chain management (DSCM) strategies and operational performance. The many DSCM practices that are investigated through a comprehensive literature review in order to ascertain their relationship to operational performance

information and communication technology practices, supplier relationship practices, supply chain manufacturing warehousing management practices. transportation management systems, and customer relationship management. Two illustrations Using multiple regression analysis, the relationship between dependent and independent variables was investigated, and the t-test was used to compare the degree of agreement and acceptance of various DSCM techniques. The difference between agreement level and adoption level was less pronounced for information and communication technology practices, transportation management systems, and customer relationship management practices, but it was significantly greater for supplier relationship practices, supply chain manufacturing practices, and warehousing management systems [4].

Kartik Mahajan et al. [2024] Through an analysis of several DSCM practices, such as supplier relationship management, supply chain manufacturing, warehousing management systems, transportation management systems, customer relationship management, and information and communication technology practices, the research paper aims to ascertain whether there is a correlation between different DSCM practices and operational performance. Examining supply chain management challenges and issues in the Indian dairy industry is the main objective of the study. Based on the findings, the ultimate goal is to make recommendations to companies who are just starting to implement dairy supply chain management in order to strengthen their ties with suppliers and consumers [5].

Gyanesh Kumar Sinha et al. [2023] The dairy industry in India, one of the fastest-growing industries globally and a contributor to over 5% of the country's GDP, directly employs millions of farmers. Implementing sustainable supply chain practices is becoming more and more important as the industry expands in order to maintain viability and lessen negative impacts on the environment and society. The current study's objective is to look into the supply chain management plans of the two leading dairy firms, Amul and Danone. This study primarily uses reports, trustworthy websites, and peerreviewed papers as secondary sources. A case study approach has been used primarily to compare two leading dairy companies in terms of supply chain sustainability. Comparatively, significant elements such as the scale of dairy production, pricing, technology utilization, traditional supply chain management, artificial intelligence in sustainable supply chains, and logistics management in a few dairy enterprises have all been carefully studied [6].

Yash P Sale et al. [2021] Supply chain management is used to plan and regulate the movement of information between customers, warehouses, suppliers, and facilities. The main objective of supply chain management is to expand the clientele while making an effort to maintain expenses as low as possible. Supply chain management includes obtaining materials from suppliers, transporting materials from suppliers to facilities, manufacturing at

facilities, transferring items from facilities to cold storage, and transferring milk products from cold storage to retailers. The four core and crucial components of supply chain management are retailer zones (RZs), distribution centers (DCs), milk processing facilities, and milk suppliers (farmers). Operational management is necessary for the acquisition of raw materials, their processing and conversion into finished products, and the ultimate delivery of milk products to merchants [7].

Rahul S Mor [2018] Particularly in terms of women's empowerment, the dairy industry significantly improves the socioeconomic status of rural India. Most of the time, the literature talks about the dairy supply chain's structure or its subcomponents, but it doesn't explain why, what, or how. The number of systematic literature reviews (SLRs) on dairy supply chain management (DSCM) practices is few. This paper offers a thorough analysis of the literature publications pertaining to DSCM methods. Furthermore, the paper assesses the extent to which the SLR technique may be applied to DSCM in order to create a consistent knowledge pool by creating a context-sensitive research. They highlight the primary points brought up in the articles under examination. The authors selected papers from peer-reviewed journals and categorized them into three groups: decision-making methods (DMS), risk management (RM), and distribution management (DM). The research was conducted within the last eleven years

ZiaUllah Muhammad et al. [2014] The particular aims of this article are to illustrate the importance of dairy supply chain management and offer instances of current industry practices in Pakistan. specifically utilizing information from the FAO and the Pakistan Economic Survey to provide light on the production and consumption trends in emerging nations. There were 730 million tonnes of milk produced worldwide in 2011, and this number is expected to increase. Notably, 98% of Pakistan's milk supply chain is controlled by informal dealers, who manage 80% of milk consumption in developing countries. Supply chain disruption has become a major issue due to informal channel bargaining leverage and knowledge barriers. Currently, Pakistan, India, and China are the top four milk-producing nations in the world. However, both milk farmers and consumers have been suffering from the financial, social, and health effects of the unauthorized dairy supply chain actors [9].

Byomkesh Talukder et al. [2021] Convergent innovation (CI), which creates a thorough integrated framework of indicators currently utilized in lean, agile, sustainable, and resilient supply chain paradigms, is used to consider the management of a dairy company's supply chain, including the procurement, processing, and customer distribution of its products. CI is a meta-framework that focuses business and actor decisions across society on the convergence of economic, social, and environmental outcomes to create supply and demand for profitable outcomes, thereby opening up new opportunities

for supply chains, market systems, and commercial innovation [10].

Teja Naganboyina et al. [2022] Among the most successful in the Indian market, the dairy sector has been the world leader in milk production since 1997. About 48% of India's milk production is believed to be consumed by the producers themselves, with the remaining 52% being marketed in cities. Of this, the organized sector (private dairies and dairy cooperatives) handles just 40%, while the unorganized dairy sector handles the remaining 60%. To boost the percentage of organized flow in the dairy business, the government has launched a number of initiatives. The size and expansion of the dairy market in India during the past ten years, together with its statistics, were reviewed in this paper. I conducted in-person interviews with several dairy chain participants in order to develop the process flow chart that depicts the procurement and delivery of milk to the end user in both the organized and unorganized sectors. I pay special attention to the cold chain [11].

Devi Prasad Kotni et al. [2022] India has become the largest producer and consumer of dairy products in the world since 1998 due to a steady increase in the supply of milk and milk derivatives. Dairy farming is a major source of revenue and employment in rural India. Milk collection in the Prakasam District began in 1975 with the opening of the Ongole Milk Chilling Center. The majority of the milk producers in the district are members of marginal, small farmer, and landless agricultural labor groups who are also socially and economically disadvantaged. In addition to examining Prakasam Milk Producer Company Limited's supply chain from farmers to consumers, the study aims to identify various milk supply chain operations at each supply chain member, including farmers, milk collecting agents, the company, distributors, agents, retailers, and customers [12].

Ritul Tripathi et al. [2021] Supply chain management seeks to minimize expenses for the business while facilitating the effective movement of appropriate products to the appropriate locations at the appropriate times, creating value for the consumers. Dairy products mean shorter turnaround times between manufacture and delivery. Products leave the producer's table and arrive at retailers more quickly. However, quick product life cycles, shorter lead times for retail inventories, and quick product distribution are some of the issues that dairy product retail network companies like Amul Dairy, Parag Diary, and others frequently confront. The main topic of this research paper is how supply chain management has helped two well-known dairy product brands—Amul Dairy and Parag Dairy in particular—overcome significant obstacles. Amul Dairy and Parag Diary's supply chain management is evidence of their status as a significant and prosperous retail behemoth on a worldwide scale. According to Gartner, Parag Diary is ranked third in the supply chain. A comparative study of their inventory management strategies is also included [13].

Janvi Mungekar et al. [2023] This study investigates how block chain technology can revolutionize the dairy supply chain, with a focus on increasing transparency and traceability. We carefully investigate the smooth integration of block chain across various supply chain stages using a thorough case study methodology. The results highlight the effectiveness of smart contract automation, the strength of real-time data sharing, and the underlying characteristics of block chain that strengthen trust. By addressing issues such as early setup expenses, we offer workable solutions [14].

Albert Tan et al. [2020] Dairy product end-to-end food traceability systems have been overlooked, despite the fact that they are essential for everyone because of their extensive global consumption. Vietnamese consumers who purchase local dairy products have limited access to reliable traceability solutions that allow them to independently confirm their purchases. "How can technology such as Block chain help address the food safety issues in the Vietnamese domestic dairy sector?" is the question that motivates the writers to seek answers. with the intention of both furthering uncharted research and offering practical applications [15].

Yingrong Zheng et al. [2022] Developing recommendations to improve the efficiency of dairy supply chain management in large cities was the goal of this research. The study's goal was achieved through a complex multi-stage research effort that involved online interviews with three key categories of dairy supply chain participants: farmers, intermediaries, and end consumers. In order to collect objective data from the producer to the end user, the three main groups were each questioned at the same time. Kazakhstan's Almaty and the Russian Federation's Yekaterinburg assessed the proposed approaches for their supply chains for dairy products [16].

Romana Heinzova et al. [2022] Food production is one of the most significant sectors of the food industry in the Czech Republic and the EU. Its close ties to the main agricultural sector, from which it purchases supplies to process and market, are another significant influence. The product's safety and quality are essential requirements for this process. Companies must use an efficient traceability system and traceability of these criteria to demonstrate the safety and quality of their food. Production and logistical elements are greatly impacted by these circumstances. The dairy sector is the main topic of this study. The entire agrifood cycle depends on this industry. Operations in these kinds of businesses are governed by a number of regulations that impact logistics and production. Both products and raw materials are perishable. Conversely, the consumer anticipates a high-quality, secure product at the appropriate moment. The primary goal of the article was to identify the risks associated with each stage of the logistical procedures used by the dairy industry. Special attention was paid to the areas of production, purchasing, transportation. Increasing the understanding of dairy management was the secondary

goal. There is a lack of scientific literature and expert studies in this field [17].

Abhirup Khanna et al. [2022] Traditional food supply chains have problems with data loss, product anomalies, quality compromises, and a single point of failure. Also, they are centralized. An enhanced decentralized supply chain paradigm is desperately needed, as seen by the daily influx of reports of food fraud, contamination, and adulteration from all throughout India. A country like India, which gains a lot from its demographic dividend, cannot afford to let a large portion of its youngsters go hungry by eating contaminated and adulterated dairy products. Given the severity of the situation, we propose a supply chain platform for the dairy industry that is enabled by block chain technology [18].

**Ish Kumar et al. [2024]** The research aims to boost productivity and reduce expenses in the dairy business by improving urban distribution, particularly at Bhopal Sanchi dairy. In addition to identifying inefficiencies, it assesses current routes and suggests novel distribution tactics. These adjustments result in notable enhancements, lowering dead kilometers and overall distribution costs while increasing vehicle capacity utilization. According to the report, addressing urban distribution issues is crucial to effectively meeting the growing demand for milk. By maximizing profits and reducing losses, it helps create sustainable dairy distribution systems. To analyze fleet and route optimization, ArcGIS software is used. In general, the study tackles the urgent requirement for effective. urban dairy distribution, particularly in light of India's position as a major milk producer [19].

Annie Rose Nirmala et al. [2022] Fresh milk must be properly treated from milking to processing since it is perishable. If it is not, bacteria will infect it, reducing its quality and shelf life. Reduced farmer output upstream also results in less product availability downstream from a quantity perspective. The supply chain may be somewhat at danger due to this circumstance. Tirunelveli Aavin Nellai Milk Plant samples must be used to map the risk along the supply chain. In addition to examining the supply chain pattern and its risk, this study aimed to provide techniques for risk treatment and mitigation [20].

Asma Ben Mahmoud et al. [2008] As companies realize the importance of building integrated relationships with their suppliers and consumers, supply chain management, or SCM, is a significant issue in many industries. By providing the correct product at the proper time, location, and cost, supply chain management (SCM) aims to meet the needs of the final customer. Interest in SCM in agribusiness grew in the 1990s in both the USA and Europe. The idea and its implementation have been a primary area of research and development in agriculture for the last ten years. The potential and implications of supply chain management (SCM) in developing nations have garnered more attention in recent years [21].

Vandana & Kunal Sinha et al. [2019] Being the largest producer and user of milk in the world, India's dairy

industry is gaining prominence. With 127.8 thousand tonnes of milk produced annually, Gujarat ranks fourth among Indian states. This study looks into how supply chain management works in the dairy industry. The planning and management of the flow of goods and information between farmers, cooperative societies, dairy cooperatives, distributors, retailers, and, finally, final consumers is known as supply chain management, or SCM. The foundation for Gujarat's dairy supply chain is presented in this article, with particular attention to the functions of the many players involved. The secondary literature on supply chain management for dairy products provided the information [22].

Azarruddin Shamshuddin Mulani et al. [2021] Similar to many other agribusinesses, the supply chain for the diary is intricate. From a technical standpoint, the diary chain starts with the manufacturing of raw milk and ends when different businesses, organizations, and consumers use the goods created along the value chain. The supply chain must immediately adapt to satisfy the ever-evolving demands of consumers since their choices and behaviors are not constant. A major source of revenue is thought to be dairy, although agricultural depends on the monsoon season. It is widely accepted that Indian dairy is a tool for both social and economic advancement. Milk in the nation is supplied by millions of small farmers dispersed throughout rural regions. Expanding milk production to satisfy growing demand brought on by population expansion and income rises is a challenge for the dairy industry [23].

Rayka K. Vladova et al. [2023] Around the world, millions of people regularly eat milk and milk products. In order to increase industrial competitiveness and efficiency, a sustainable supply chain management strategy that covers every process from raw materials to end users is essential. Supply chain sustainability is impacted by changes in the market. In this paper, a fresh case study from Bulgaria is used to build a sustainable dairy supply chain under ambiguous product needs using a robust optimization approach. Three milk suppliers, two dairies, and three markets are all included in the study. The supply chain entails manufacturing dairy products in accordance with different recipes while adhering to economic and ecological requirements [24].

Joseph Kasten et al. [2019] Food safety and quality are highly valued by producers, processors, regulators, and consumers across the supply chain. Since the testing labs in the US dairy supply chain are often owned by or connected to the growers and processors, there may be a conflict of interest. Several foods are tested at the time of harvest and at various intermediate stages of processing. The study's suggested approach uses blockchain technology to make sure that test results from milk analysis cannot be altered or manipulated without the other parties' knowledge, especially the regulatory body [25].

N. K. Kale et al. [2017] The Patna Dairy project's raw milk purchase from rural areas throughout five districts in

Bihar through a single channel was examined in this study. In Bihar's five districts, liquid milk is sold through two channels in the town areas. Every farmer owns his own buffalo and livestock. In the race for buffaloes, native breeds prevail 72% of the time, but the Jersey breed has the most cows (52%) [26].

Shinde V. H. et al. [2019] An important participant in the dairy industry is India. Both the livestock population and milk output in the nation are the greatest in the globe. India's dairy sector is growing rapidly because it is nutrient-dense. A common beverage in most households is milk and milk products. The number of cities and semi-urban areas in India has increased significantly. Therefore, most city people are eager to buy premium milk and milk products. In today's competitive market, supply chain management makes it possible to deliver the right items on time. Cutting expenses and improving customer satisfaction can be achieved using the newest technology, supply chain management. Quality milk and milk products are critical to the dairy industry's survival [27].

Bilge Bilgen et al. [2015] Because of its structural features—such as lengthy sequence-dependent setup times, high changeover costs, a wide variety of flavored and colored product types with intricate changeover regulations, and a limited shelf life that restricts storage duration and delivery conditions for each perishable raw material, intermediate, and final product—the dairy industry's supply chain management has drawn a lot of attention recently. This study aims to provide a critical evaluation of quantitative supply chain models used in the dairy sector. Many problem variations are examined in terms of: 2) problem and model attributes; 3) decision levels; and 4) solution techniques [28].

Yigit Kazancoglu et al. [2022] The frequency of supply chain issues is decreased by Internet of Thingsenabled technologies that facilitate data gathering and analysis, especially in supply chain operations. Technology offered by the Internet of Things is essential to support this process, especially in supply networks that are vulnerable to disruptions, like the dairy supply chain. Additionally, the most waste is produced by dairy supply chains; evaluating this waste is very beneficial to the circular economy. Therefore, using Internet of Thingsenabled technologies and data monitoring in dairy supply chains help to minimize losses; it is essential to have Internet of Things-enabled circular dairy supply networks operating [29].

**Jiaying Zhang et al.** [2022] Dairy products are necessary foods for people to eat. Nonetheless, there are regular reports regarding the safety and quality of dairy products. This study suggests a cooperative block chain-based system for monitoring the safety and quality of dairy products. It establishes the traceability connection in the dairy supply chain and builds the barcode and basic foundation of the system. At the technology level, the system guarantees the accuracy and safety of traceability

data and provides dairy traceability services to customers, enterprises, and the government [30].

From the above survey analysis on dairy supply chain operations it is observed that many several researchers have shared their opinion or Interests in improving the efficiency of DSCM Practices by considering the following parameters from the literature say time, cost, distance and demand of items. In the literature researchers approached various methods like doing survey type, Quantitative analysis like mathematical model.

# 3 Methodology

An effort has been made in this section to conduct survey using Google forms on Dairy supply chain operations from various professionals like Faculties, Industry experts etc. The Target responses were focused to be 25 responses only.

The survey form contains 6 questions as listed below:

- Q1. Which of the following requires significant attention and advancement to increase productivity, based on the organization's existing growth process?
- Q2. Do you know which supply chain department is having trouble managing the raw materials?
- Q3: How would you rank the dairy industry's supply chain operations' performance?
- Q4: What is the most important aspect of supply chain management in the dairy sector?
- Q5. Do you believe technology is essential to the management of the dairy supply chain?
- Q6: In your opinion, what are the essential elements of a successful supply chain?

Nearly 11 replies were received from individuals working in technical institutions/industries, etc. Individual respondents' perceptions on the desired aspects of dairy supply chain management practices were collected.

# 4 Discussions

In this section the various responses given by the professionals were discussed in detailed manner as follows:

- When it comes to the organization's growth potential in terms of supply chain operations, almost 45.5% of respondents prioritized operational activities. The effectiveness of supply chain management was mostly determined by the operational features of distributors, retailers, and, ultimately, customers.
- Next thing is handling of raw materials in Supply chain operations in those aspects nearly 36.4 % of the people gave more preferences for material storage in warehouse.
- Regarding the performance of the Dairy industry in Supply chin operations it is observed that nearly 72.2% of the people gave high priority by stating that performance was good.



- Nearly 54.5% of the people gave importance to timely delivery of goods in Supply chain operations that is one of the main primary key components. Cloud computing and the Internet of Things (IoT) together provide the capacity to track important dairy product parameters across the supply chain. Distributed ledger technology, like blockchain, can be utilized to effectively share and monitor quality standards for dairy products.
- Nearly 63.6% of the people gave importance to modern technology: the integration of Block chain, IOT and cyber security. Block chain technology, nearly 54.5% of individuals prioritized timely delivery, safe packaging of items, and product availability at a low cost as features of good supply chain systems.

#### 5 Conclusion

In conclusion, managing the supply chain for milk is complex undertaking that calls for meticulous preparation, cooperation, and legal compliance. To sum up, supply chain management has advanced significantly from the horse and cart to the Internet of Things. Technology and data analytics have revolutionized the supply chain sector, enabling more effective and efficient handling of commodities and products. An attempt has been made to carry out diversified survey on dairy supply chain management systems through questionnaire technique. Totally 11 responses were submitted by the individuals from various institutions. The most common thing noted here is Speedy delivery of items, Modernization of technology in supply chain operations and safe packing of items are some of the main characteristics noted in the survey questionnaire.

#### **Suggestions:**

# From Organization point of view:

Today technology modernization has become more rapid development and considered to be quick responsive in all possible ways. Suggestions is Organization must develop the facilities by equipping modernized technology like IOT, Block Chain and Cyber security.

Using this features every organization must streamline their Operational activities in effective manner.

#### From Logistics point of View:

For products that are being transshipped from a manufacturer to a warehouse or market segment, safe handling and packaging are crucial. Utilizing tracking sensors in each last item to verify that it is securely packaged and in good condition will help us enhance the packing quality.

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# **Review process**

Single-blind peer review process.