

Project Report On  
**Supply chain Management of Amul Company**

Submitted by

**ANITA MUNMUN GUPTA**

Roll NO: **206**

Submitted to



**UNIVERSITY OF MUMBAI**  
**MASTER OF COMMERCE**  
**(BUSINESS MANAGEMENT)**

Semester- IV

(2020–21)

Project Guidance by

Professor: **MR HIMANSHU LAPASHIA**



**UTTARI BHARTI SABHA'S**

**RAMANAND ARYA D.A.V COLLEGE OF COMMERCE AND SCIENCE**

**DATAR COLONY, BHANDUP (EAST)**

**Ramanandarya D.A.V. College**

**Bhandup (East) Mumbai 400042**

*Certificate*

This is to certify that **MISS ANITA MUNMUN GUPTA** has worked and duly completed her Project Work for the degree of Master in Commerce under the Faculty of Commerce in the subject of **SUPPLY CHAIN MANAGEMENT AND LOGISTICS** and her project is entitled **A STUDY OF SUPPLY CHAIN MANAGEMENT OF AMUL COMPANY** under my supervision.

I further certify that the entire work has been done by the learner under my guidance and that no part of it has been submitted previously for any Degree or Diploma of any University. It is her own work and facts reported by her personal findings and investigations.

**Co-Ordinator: DR SUSHAMA PATIL**

**Principal: DR AJAY M. BHAMARE**

**Project Guide/Internal Examiner: MR HIMANSHU LAPASHIA    External Examiner:**

**RamanandArya D.A.V. College**

**Bhandup (East) Mumbai 400042**

***Declaration by learner***

I, the undersigned **MISS. ANITA MUNMUN GUPTA** declare that the work embodied in this project work hereby, titled **SUPPLY CHAIN MANAGEMENT OF AMUL COMPANY** forms my own contribution to the research work carried out under the guidance of **MR HIMANSHU LAPASHIA** is a result of my own research work and has not been previously submitted to any other University for any other Degree to this or any other University. Wherever reference has been made to previous works of others, it has been clearly indicated as such and included in the bibliography.

I, here by further declare that all information of this document has been obtained and presented in accordance with academic rules and ethical conduct.

Name of the learner: **ANITA M GUPTA**

Signature:

**Certified by**

Name of the Guiding Teacher: **MR. HIMANSHU LAPASHIA**

Signature:

## ***Acknowledgment***

To list who all have helped me is difficult because they are so numerous, and the depth is so enormous.

I would like to acknowledge the following as being idealistic channels and fresh dimensions in the completion of this project.

I take this opportunity to thank the **University of Mumbai** for giving me chance to do this project.

I would like to thank my **Principal, DR. AJAY M. BHAMARE** for providing the necessary facilities required for completion of this project.

I take this opportunity to thank our **Coordinator DR SUSHAMA PATIL**, for her moral support and guidance.

I would also like to express my sincere gratitude towards my project guide **MR HIMANSHU LAPASHIA** whose guidance and care made the project successful.

I would like to thank my **College Library**, for having provided various reference books and magazines related to my project.

I would like to thank each and every person who directly or indirectly helped me in the completion of the project especially **my Parents and Peers** who supported me throughout my project.

Lastly, I would like to thank you **AMUL COMPANY** to give me information related to their companies.

**Signature of the Student**

**Anita M Gupta**

## **INDEX**

| <b>SR. NO</b> | <b>SECTION NAME</b>          | <b>PAGE NO</b> |
|---------------|------------------------------|----------------|
| 1             | INTRODUCTION                 | 6              |
| 2             | OBJECTIVES                   | 34             |
| 3             | REVIEW OF LITERATURE         | 35             |
| 4             | RESEARCH METHODOLOGY         | 37             |
| 5             | DATA COLLECTION              | 38             |
| 6             | DATA ANALYSIS/INTERPRETATION | 39             |
| 7             | CONCLUSION                   | 45             |
| 8             | LIMITATION                   | 46             |
| 9             | RECOMMENDATION               | 48             |
| 10            | REFERENCE                    | 50             |
| 11            | ANNEXURE                     | 51             |

## **INTRODUCTION**

### **WHAT IS A SUPPLY CHAIN?**

A supply chain is a network between a company and its suppliers to produce and distribute a specific product to the final buyer. This network includes different activities, people, entities, information, and resources. The supply chain also represents the steps it takes to get the product or service from its original state to the customer.

Companies develop supply chains so they can reduce their costs and remain competitive in the business landscape.

Supply chain management is a crucial process because an optimized supply chain results in lower costs and a faster production cycle

The elements of a supply chain include all the functions that start with receiving an order to meeting the customer's request. These functions include product development, marketing, operations, distribution networks, finance, and customer service.

Supply chain management is a very important part of the business process. There are many different links in this chain that require skill and expertise. When supply chain management is effective, it can lower a company's overall costs and boost profitability. If one link breaks down, it can affect the rest of the chain and can be costly.

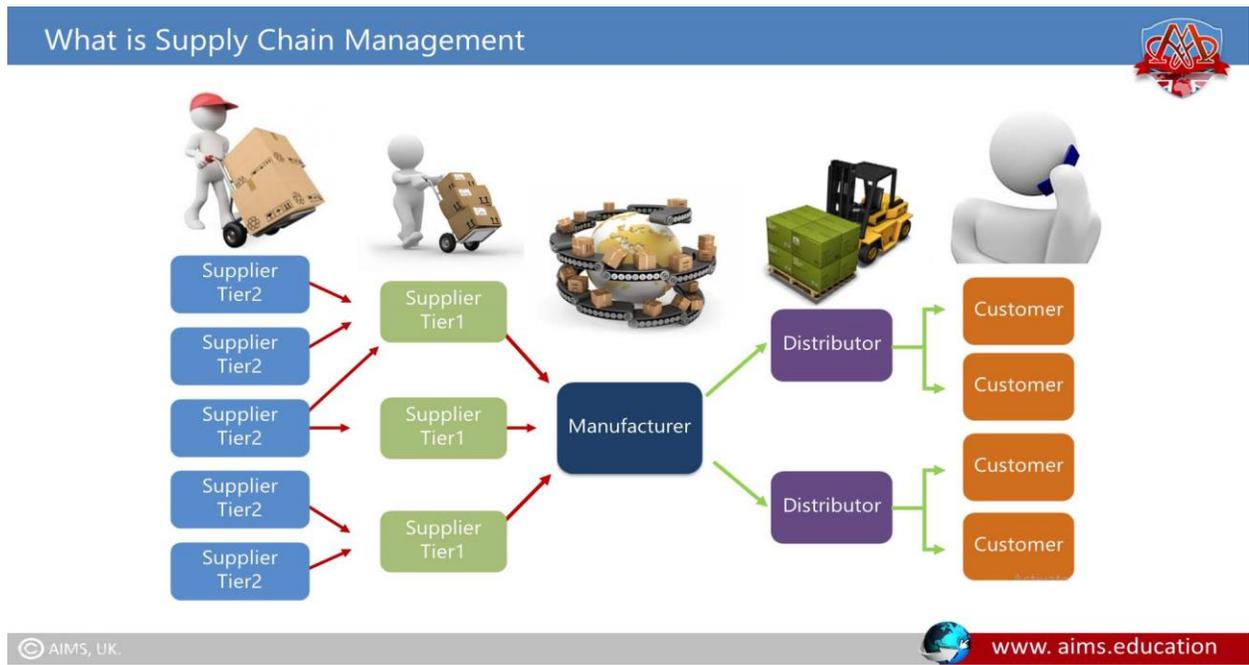
### **WHAT IS SUPPLY CHAIN MANAGEMENT?**

Supply chain management, or SCM, is the management of how goods and services evolve from raw materials into products sold to consumers. It includes the processes of moving and storing the materials used to produce goods, storing the finished products until they sell and tracking where sold products go so that you can use that information to drive future sales. The supply chain itself includes everything from the procurement of the raw materials to make the goods to the delivery of the end product to the consumer.

The process of SCM involves every aspect of business operation, including logistics, purchasing and information technology. It integrates materials, finances, suppliers, manufacturing facilities,

wholesalers, retailers and consumers into a seamless system. Here are some of the steps involved in establishing a system of supply chain management:

Designing and planning the supply chain when the business is established  
Carrying out the plan and carefully controlling for the variables  
Monitoring the performance of each part of the supply chain  
Communicating regularly with supply chain partners and ensuring their participation in the plan  
Supply chain management seeks to streamline every part of the chain and the processes involved. By doing this, profits are maximized and product defects are minimized



## **DEFINITION**

### **OLIVER AND WEBBER (1982).**

“Supply chain management (SCM) is the process of planning, implementing, and controlling the operations of the supply chain with the purpose to satisfy customer requirements as efficiently as possible. Supply chain management spans all movement and storage of raw materials, work-in-process inventory, and finished goods from point-of-origin to point-of- consumption.”

### **TAN, KANNAN AND HANDFIELD (1998)**

“Supply chain management encompasses materials/supply management from the supply of basic raw materials to final product (and possible recycling and re-use). Supply chain management focuses on how firms utilize their suppliers' processes, technology and capability to enhance competitive advantage.”

### **SIM CHI-LEVI, KAM IN SKY AND SIM CHI-LEVI (2008)**

“Supply Chain Management is a set of approaches utilized to efficiently integrate suppliers, manufacturers, warehouses, and stores, so that merchandise is produced and distributed at the right quantity, to the right locations, and at the right time, in order to minimize system wide costs while satisfying service level requirements.

### **WISNER, TAN AND LEONG (2012)**

“Supply chain management is the integration of trading partners’ key business processes from initial raw material extraction to the final or end customer, including all intermediate processing, transportation and storage activities and final sale to the end product customer.”

## **EVOLUTION OF SUPPLY CHAIN MANAGEMENT**

The global supply chain has seen enormous changes over the last 100 years. Every part of how we source, manufacture and transport goods has been transformed. From the introduction of new handling procedures to relying on ocean-going vessels, and from containerization to computerization, global supply chains are both more complex and more efficient than they’ve ever been

We thought it would be interesting to take a look back at how supply chains worked and the key innovations that have driven things forward.

### **THE SUPPLY CHAIN BEFORE 1900 — LOCAL AND REGIONAL SUPPLY AND MANUFACTURING**

Prior to the industrial revolutions in Europe and the U.S., the vast majority of supply chains were local in nature, and typically restricted to regions. For example, in an agrarian supply chain, a farmer would cut the wheat, send it to a mill for grinding into flour, then send it to a baker to make into bread, and finally it would be sold at a market stall.

The industrial revolutions started to change things. As railroads were laid, it became faster, easier and cheaper to transport goods over longer distances, although supply chains still tended to be limited to countries. In the 19th century, rudimentary hand trucks and other tools made it easier to handle goods. International ocean trade was fairly inefficient as loose goods were stored in ship’s hulls, and required a lot of effort to load and unload.

## **The Supply Chain in the Early 20th Century — Improvements to Trucking and Warehouses**

Since the invention of the internal combustion engine and cars in the late 19th century, pioneers started developing trucks to allow for the faster transport of goods by road. The first semi-truck was invented at the very end of the 19th century and Mack Trucks was founded in 1900. Originally running on gasoline, diesel engines were introduced in the mid-1920s. There were early concepts for the forklift truck in the early 20th century, with further development prior to 1930.

A major development in supply chain storage was in 1925 when pallets started to be used in warehouses. This allowed goods to be consolidated together onto pallets, which could then be stacked vertically, saving space and making goods handling more efficient.

## **The Supply Chain from the 1930s to the 1940s — Greater Mechanization**

Logistics became very important during World War II, as military organizations needed efficient supply chains at home and in Europe. At home, supply chains were necessary to manufacture military hardware and supplies, while abroad, it was essential to get supplies and support to troops as quickly as possible. The 1940s saw a consolidation of industrial engineering and operations research into supply chain engineering.

The development of pallets, pallet handling and storage systems also continued for the next few decades. The intent was to use warehousing storage space more efficiently and to optimize racking and layout. These changes would make start streamlining the loading, unloading, consolidation and handling of goods, resulting in faster deliveries and distribution.

## **The Supply Chain in the 1950s — Standardization and the Introduction of Containerization**

Arguably, the greatest revolution in global supply chains was the invention of the shipping container, and all the logistics and modes of transport needed to support it. As we wrote in our guide to containerization, “The most important feature of the shipping container is that it is intermodal—it can be transported easily using several different types of transport. Whether a container is being pulled by road on a truck, carried on the railway or shipped overseas on a container ship, standardization makes transporting and handling these containers fast and easy. That means cost and efficiency savings throughout the supply chain. Every

minute saved translates directly to faster transfer of goods, reduced waste and environmental impact, and better margins.”

Although shipping containers wouldn't be fully standardized until the late 1960s, the first shipping containers were invented during the mid-1950s. Around the same time, transport manufacturers began building vehicles that could transport these containers. The invention of containerization was one of the main drivers in making global trade cheaper and more efficient.

### **The Supply Chain from the 1960s to the 1980s — Greater Efficiencies and Computerization**

During the 1960s, goods distribution shifted away from railroads and towards trucking. The continued evolution of pallets, handling equipment, containerization and other areas meant that freight transportation was more reliable. This led to the efficient transport of time-sensitive raw materials, parts and products, even over longer distances.

Computerization started to gain popularity in the mid-1960s and IBM developed the first computerized inventory management and forecasting system in 1967. Before the 1960s, logistics records and data were captured, sent and reported through paper. Data computerization started to streamline logistics, and created opportunities in many areas including more accurate forecasting, better warehouse storage, truck routing and better inventory management.

The first real-time warehouse management system was installed in 1975, making it easier to track orders, inventory and distribution and leading to greater efficiencies. Around the same time, barcodes made it much easier to scan products, starting the move away from manual input of SKUs and product codes.

### **The Supply Chain in the 1980s and 1990s — Further Efficiencies and the Shift to a Global Model**

The 1980s saw supply chain stakeholders, transportation manufacturers and more building on their successes. In 1983, the term “Supply Chain Management” was coined, and personal computing further revolutionized the supply chain. New software like flexible spreadsheets, mapping and route planning made it easier to track costs and maximize profits. This was coupled with other advancements including air freight optimization, supply chain distribution networks and the introduction of Enterprise Resource Planning (ERP) systems.

MIT also developed RFID tags to make it easier to electronically track goods and shipments, a predecessor of the Internet of Things devices we use today.

### **The Supply Chain Now — True Globalization**

All of this history brings us to the present, and continued transformation in global supply chains. One of the biggest influences has been the explosion of manufacturing in Asia, with China, Japan and Korea becoming major suppliers and exporters of goods. At the same time, AI and machine learning combines with predictive and prescriptive analytics to provide better forecasting, enhanced order management and more. What's more, the supply chain is evolving toward a more data-driven, network-driven and collaborative supply chain ecosystem that drives real value and growth for all participants.

Of course, there are still challenges to overcome. Consumers and businesses are increasingly interested in the ethics of sourcing and manufacturing goods, especially from environmental and workers' rights perspectives. At the same time, supply chain managers need effective risk management to deal with the unexpected, whether that's customs and tariffs, natural disasters or issues with global transport.

Whatever the future holds, one thing is certain. If we apply the same innovation to global supply chains as we have in the past, then we'll continue to see greater efficiencies, optimization and profit margins.

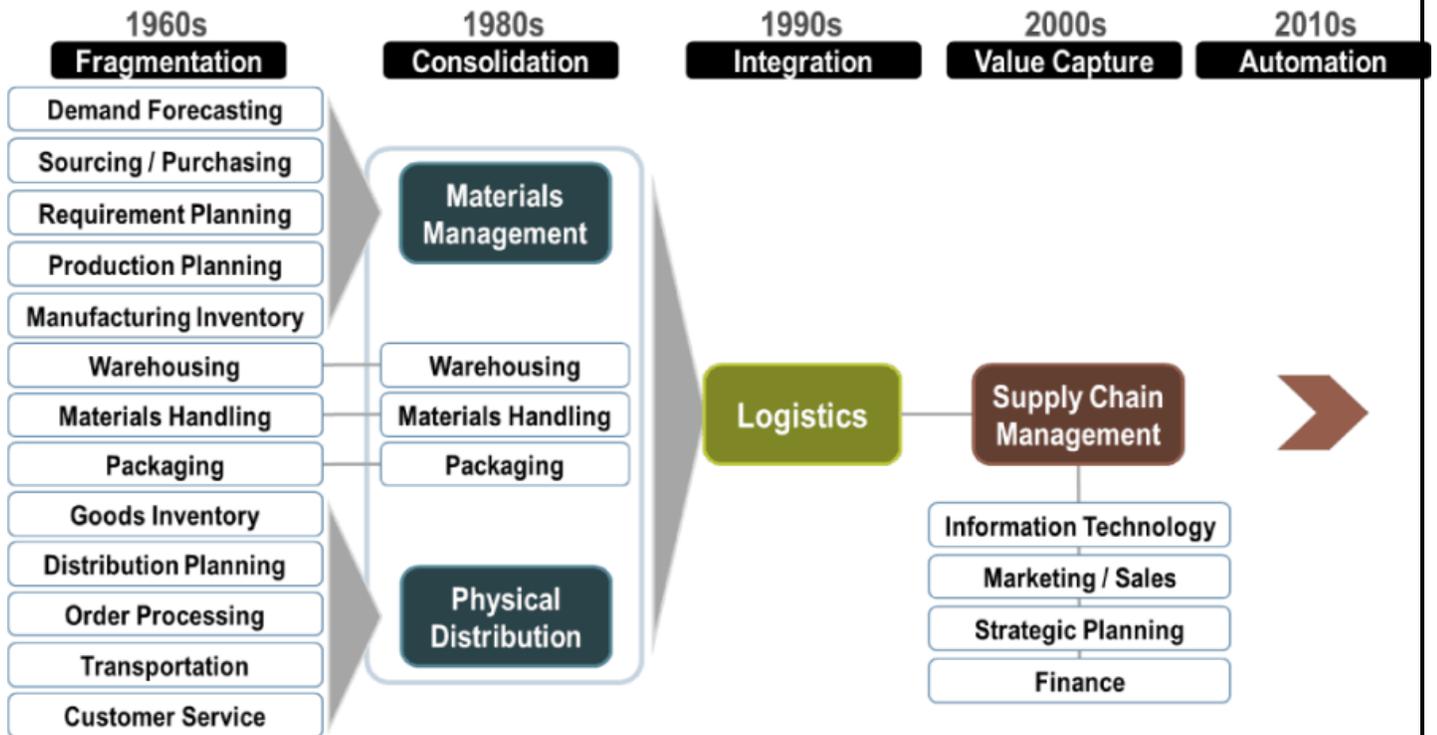
### **The Supply Chain Now — True Globalization**

All of this history brings us to the present, and continued transformation in global supply chains. One of the biggest influences has been the explosion of manufacturing in Asia, with China, Japan and Korea becoming major suppliers and exporters of goods. At the same time, AI and machine learning combines with predictive and prescriptive analytics to provide better forecasting, enhanced order management and more. What's more, the supply chain is evolving toward a more data-driven, network-driven and collaborative supply chain ecosystem that drives real value and growth for all participants.

Of course, there are still challenges to overcome. Consumers and businesses are increasingly interested in the ethics of sourcing and manufacturing goods, especially from environmental and workers' rights perspectives. At the same time, supply chain managers need effective risk management to deal with the unexpected, whether that's customs and tariffs, natural disasters or issues with global transport.

Whatever the future holds, one thing is certain. If we apply the same innovation to global supply chains as we have in the past, then we'll continue to see greater efficiencies, optimization and profit margins.

The Blume Digital Platform is data-driven and connects trading partners in a collaborative supply chain ecosystem to drive real value and growth for our customers worldwide. Our cloud-based platform is open and neutral, and its extensible architecture enables continuous innovation to forge the future of the global supply chain.



## FUNCTION OF SUPPLY CHAIN MANAGEMENT

The five functions of supply chain management include the following:

- **Purchasing**

The first function of supply chain management is purchasing. In the manufacturing process, raw materials are required to produce goods and products. It is important that these materials are procured and delivered on time so that production can begin. For this to occur, coordination with suppliers and delivery companies will be required to avoid any potential delays.

- **Operations**

Demand planning and forecasting are usually required before materials can be procured, as the demand market will dictate how many units to be produced and how much material is required for production. This function is important in supply chain management as organizations must accurately forecast demand to avoid having too much or too little inventory that will lead to losses in revenue. Therefore, demand

planning and forecasting must be tied in with inventory management, production, and shipping to avoid such mistakes.

- **Logistics**

Logistics is the part of supply chain management that coordinates all aspects of planning, purchasing, production, warehousing, and transportation so that the products will reach the end-consumer without any hindrances. It is helpful to have adequate communication between multiple departments so that products can be shipped to customers quickly and at the lowest cost.

- **Resource Management**

Production consumes raw materials, technology, time, and labor. Resource management ensures that the right resources are allocated to the right activities in an optimized manner. This will ensure that an optimized production schedule is created to maximize the efficiency of the operations. When calculating the available capacity, you should consider the capabilities of each resource and determine whether they can perform the work that is scheduled on it. This will ensure that you are not over-promising orders and that your production schedule is feasible and accurate.

- **Information Workflow**

Information sharing and distribution is what keeps all of the other functions of supply chain management on track. If the information workflow and communication are poor, it could break apart the entire chain. Many disruptions that arise in supply chains can be prevented by increased visibility and communication. Having a consistent system that is used by all departments will ensure that everyone is working with the same set of data and will prevent miscommunications and time spent updating everyone on new developments.

## **THE IMPORTANCE OF SUPPLY CHAIN MANAGEMENT**

It is well known that supply chain management is an integral part of most businesses and is essential to company success and customer satisfaction.

- 1) **Boost Customer Service**

- Customers expect the correct product assortment and quantity to be delivered

- Customers expect products to be available at the right location. (i.e., customer satisfaction diminishes if an auto repair shop does not have the necessary parts in stock and can't fix your car for an extra day or two).
- Right delivery Time-Customers expect products to be delivered on time (i.e., customer satisfaction diminishes if pizza delivery is two hours late or Christmas presents are delivered on December 26).
- Right After Sale Support – Customers expect products to be serviced quickly. (i.e., customer satisfaction diminishes when a home furnace stops operating in the winter and repairs can't be made for days)

## 2) Reduce Operating Costs

Decreases Purchasing Cost – Retailers depend on supply chains to quickly deliver expensive products to avoid holding costly inventories in stores any longer than necessary. For example, electronics stores require fast delivery of 60" flat-panel plasma HDTV's to avoid high inventory costs.

- Decreases Production Cost – Manufacturers depend on supply chains to reliably deliver materials to assembly plants to avoid material shortages that would shut down production. For example, an unexpected parts shipment delay that causes an auto assembly plant shutdown can cost \$20,000 per minute and millions of dollars per day in lost wages.
- Decreases Total Supply Chain Cost – Manufacturers and retailers depend on supply chain managers to design networks that meet customer service goals at the least total cost. Efficient supply chains enable a firm to be more competitive in the marketplace. For example, Dell's revolutionary computer supply chain approach involved making each computer based on a specific customer order, then shipping the computer directly to the customer. As a result, Dell was able to avoid having large computer inventories sitting in warehouses and retail stores which saved millions of dollars. Also, Dell avoided carrying computer inventories that could become technologically obsolete as computer technology changed rapidly
- Increases Cash Flow – Firms value supply chain managers because they speed up product flows to customers. For example, if a firm can make and deliver a product to a customer in 10 days rather than 70 days, it can invoice the customer 60 days' sooner.

Lesser known, is how supply chain management also plays a critical role in society. SCM knowledge and capabilities can be used to support medical missions, conduct disaster relief operations, and handle other types of emergencies.

Whether dealing with day-to-day product flows or dealing with an unexpected natural disaster, supply chain experts roll up their sleeves and get busy. They diagnose problems, creatively work around disruptions, and figure out how to move essential products to people in need as efficiently as possible.

#### **4) Societal Roles of SCM**

##### **Ensure Human Survival**

- **SCM Helps Sustain Human Life** – Humans depend on supply chains to deliver basic necessities such as food and water. Any breakdown of these delivery pipelines quickly threatens human life. For example, in 2005, Hurricane Katrina flooded New Orleans, LA leaving the residents without a way to get food or clean water. As a result, a massive rescue of the inhabitants had to be made. During the first weekend of the rescue effort, 1.9 million meals and 6.7 million liters of water were delivered.
- **SCM Improves Human Healthcare** – Humans depend on supply chains to deliver medicines and healthcare. During a medical emergency, supply chain performance can be the difference between life and death. For example, medical rescue helicopters can save lives by quickly transporting accident victims to hospitals for emergency medical treatment. In addition, the medicines and equipment necessary for treatment will be available at the hospital as a result of excellent supply chain execution
- **SCM Protects Humans from Climate Extremes** – Humans depend on an energy supply chain to deliver electrical energy to homes and businesses for light, heat, refrigeration and air conditioning. Logistical failure (a power blackout) can quickly result in a threat to human life. For example, during a massive East Coast ice storm in January 1998, 80,000 miles of electrical power lines fell resulting in no electricity for 3,200,000 Montreal, Quebec residents. Due to extreme cold, 30 died and 25% of all Quebec residents left home to seek heated shelter. In addition, economic costs included \$3 billion in lost business, \$1 billion in home damage and \$1 billion in government expenditures.

#### **5) Improve Quality of Life**

- **Foundation for Economic Growth** – Societies with a highly developed supply chain infrastructure (modern interstate highway system, vast railroad network, numerous modern ports and airports)

are able to exchange many goods between businesses and consumers quickly and at low cost. As a result, the economy grows. In fact, the one thing that poorest nations have in common is no or a very poorly developed supply chain infrastructure.

- **Improves Standard of Living** – Societies with a highly developed supply chain infrastructure (modern interstate highway system, vast railroad network, numerous modern ports and airports) are able to exchange many goods between businesses and consumers quickly and at low cost. As a result, consumers can afford to buy more products with their income thereby raising the standard of living in the society. For instance, it is estimated that supply chain costs make up 20% of a product's cost in the U.S. but 40% of a product's cost in China. If transport damage is added in, these costs make up 60% of a product's cost in China. The high Chinese supply chain cost is a major impediment to improving the standard of living for Chinese citizens. Consequently, China has embarked on a massive effort to develop its infrastructure.
- **Job Creation** – Supply chain professionals design and operate all of the supply chains in a society and manage transportation, warehousing, inventory management, packaging and logistics information. As a result, there are many jobs in the supply chain field. For example, in the U.S., logistics activities represent 9.9% of all dollars spent on goods and services in 2006. This translates into 10,000,000 U.S. logistics jobs.
- **Opportunity to Decrease Pollution** – Supply chain activities require packaging and product transportation. As a by-product of these activities, some unwanted environmental pollutants such as cardboard waste and carbon dioxide fuel emissions are generated. For example, paper and paperboard accounted for 34% of U.S. landfill waste in 2005. Only 50% of the 84 million tons of paper and paperboard waste were recycled. Also, carbon dioxide emissions from transportation accounted for 33% of total U.S. CO<sub>2</sub> emissions in 2005. As designers of the network, supply chain professionals are in a key position to develop more sustainable processes and methods.
- **Opportunity to Decrease Energy Use** – Supply chain activities involve both human and product transportation. As a by-product of these activities, scarce energy is depleted. For example, currently transportation accounts for 30% of world energy use and 95% of global oil consumption. As designers of the network, supply chain professionals have the role of developing energy-efficient supply chains that use fewer resources.

## **6) Protect Cultural Freedom and Development**

- Defending Human Freedom – Citizens of a country depend on military logistics to defend their way of life from those who seek to end it. Military logisticians strategically locate aircraft, ships, tanks, missiles and other weapons in positions that provide maximum security to soldiers and other citizens. Also, superior logistics performance yields military victory. For example, the B-2 Stealth Bomber is able to deliver bombs to target without being detected by enemy radar.
- Protects Delivery of Necessities – Citizens of a country depend on supply chain managers to design and operate food, medicine and water supply chains that protect products from tampering. Sophisticated packaging techniques, state of the art surveillance cameras, global positioning systems and RFID inventory tracking are some of the methods used to deter terrorists from accessing these vital logistics systems.

## **PROCESS OF SUPPLY CHAIN MANAGEMENT**

Supply chain management is a process used by companies to ensure that their supply chain is efficient and cost-effective. A supply chain is the collection of steps that a company takes to transform raw materials into a final product. The five basic components of supply chain management are discussed below –

### **➤ Plan**

The initial stage of the supply chain process is the planning stage. We need to develop a plan or strategy in order to address how the products and services will satisfy the demands and necessities of the customers. In this stage, the planning should mainly focus on designing a strategy that yields maximum profit.

For managing all the resources required for designing products and providing services, a strategy has to be designed by the companies. Supply chain management mainly focuses on planning and developing a set of metrics

### **➤ Develop(Source)**

After planning, the next step involves developing or sourcing. In this stage, we mainly concentrate on building a strong relationship with suppliers of the raw materials required for production. This involves not only identifying dependable suppliers but also determining different planning methods for shipping, delivery, and payment of the product.

Companies need to select suppliers to deliver the items and services they require to develop their product. So in this stage, the supply chain managers need to construct a set of pricing, delivery and payment processes with suppliers and also create the metrics for controlling and improving the relationships.

Finally, the supply chain managers can combine all these processes for handling their goods and services inventory. This handling comprises receiving and examining shipments, transferring them to the manufacturing facilities and authorizing supplier payments.

➤ **Make**

The third step in the supply chain management process is the manufacturing or making of products that were demanded by the customer. In this stage, the products are designed, produced, tested, packaged, and synchronized for delivery.

Here, the task of the supply chain manager is to schedule all the activities required for manufacturing, testing, packaging and preparation for delivery. This stage is considered as the most metric-intensive unit of the supply chain, where firms can gauge the quality levels, production output and worker productivity.

➤ **Deliver**

The fourth stage is the delivery stage. Here the products are delivered to the customer at the destined location by the supplier. This stage is basically the logistics phase, where customer orders are accepted and delivery of the goods is planned. The delivery stage is often referred as logistics, where firms collaborate for the receipt of orders from customers, establish a network of warehouses, pick carriers to deliver products to customers and set up an invoicing system to receive payments.

➤ **Return**

The last and final stage of supply chain management is referred as the return. In the stage, defective or damaged goods are returned to the supplier by the customer. Here, the companies need to deal with customer queries and respond to their complaints etc.

This stage often tends to be a problematic section of the supply chain for many companies. The planners of supply chain need to discover a responsive and flexible network for accepting damaged, defective and extra products back from their customers and facilitating the return process for customers who have issues with delivered products.

## **BENEFITS OF SUPPLY CHAIN MANAGEMENT**

When done effectively, supply chain management helps a business to gain a competitive advantage by delivering products more quickly to customers. Here are a few ways in which SCM accomplishes this without requiring the company to lower prices:

SCM lowers the cost of doing business by reducing purchasing and production expenses. For example, if you own a grocery store and buy tomatoes directly from the farmer, you eliminate the expense of having a third party buy for you. Purchasing directly from the source gets you better pricing and gets the food to your shelves to sell more quickly and efficiently.

SCM supports the strategic plan for the business and helps to build the infrastructure to support future growth, even on a global scale. If you, as the grocery store owner, develop strategic partnerships with the farmers early in your business operation, then the farmers can grow their operation as you grow yours. You are better able to scale those partnerships as the business grows.

SCM helps the business balance the supply of products with market demand. Using the grocery store example, if you are buying tomatoes directly from the farmer, you can better negotiate directly with the farmer on how many tomatoes you buy each season.

SCM allows for more efficient and effective customer service. Customers receive their products quickly and as promised. For example, if the farmer brings the tomatoes directly to your grocery store, then the product will likely be fresher and less damaged than if it traveled through a third party supplier before arriving on your shelves.

The ultimate goal of effective supply chain management is higher profits through improved customer satisfaction and a lower cost of doing business. Profits are healthier when costs are controlled and reduced where possible. Operating costs go down when the costs of buying raw materials and producing goods to sell go down.

## **BARRIERS OF SUPPLY CHAIN MANAGEMENT**

Despite its significant benefits, the implementation of SCM is challenging, and companies continue to encounter barriers that prevent them from implementing effective SCM. Ref. categorized the barriers as managerial, technological, financial, organizational and collaborative, whereas grouped the barriers as strategic, cultural, technological, individual and organizational. On the other hand, classified these barriers

as structural resisters, sociological resisters, organizational routines and individual skills. These barriers exist internally as well as externally. Full benefits of SCM implementation can be achieved when companies are able to identify and overcome these barriers to stay competitive in today's changing environment. These barriers are complex in nature, and thus it is crucial for managers to understand them well so that the barriers can be timely resolved.

Internal SCM barriers stem from limited support from management, inadequate employee empowerment and training, insufficient funds and an inferior information technology base. Additionally, the problems among organizations and partners related to their refusal to share vital information, lack of trust and non-collaboration represent the external barriers to SCM as well as analyzed and listed the internal and external organizational barriers to SCM implementation.

1. Lack of top management commitment and support
2. Unclear organizational objective
3. Resistance to change
4. Lack of motivation and employee empowerment
5. Poor corporate culture
6. Mistrust among employee and SC partners
7. Lack of education and training to employee and supplier
8. Poor information and communication technology (ICT) infrastructure
9. Lack of financial resources
10. Unwillingness to implement supply-chain practices
11. Lack of integration among SC partners
12. Lack of collaboration among SC partners
13. Unwillingness to share information among SC partners
14. Lack of responsiveness
15. Lack of customer satisfaction.

## **INTRODUCTION OF INDIAN DAIRY INDUSTRY**

### **INDIAN DAIRY INDUSTRY**

A Profile: India's dairy sector is expected to triple its production in the next 10 years in view of expanding potential for export to Europe and the West. More ever with WTO regulations expected to come into force in coming years all the develop countries which are among big exporters today would have to withdraw the support and subsidy to their domestic milk product sector. Also India today is the lowest cost producer of per liter of milk in the world, at 27 cents, compared with the US'63 cent. Also to take advantage of this lowest cost of milk production and increase in production in the country multinational companies are planning to expand their activities here. Some those milk producers have already obtained quality standard certificates from the authorities. This will help them in marketing their products in foreign countries in processed form. The urban market for milk products is expected to grow at an accelerated pace of around 33% per annum to around Rs.83, 500 crores by year 2010. This growth is going to come from the greater emphasis on the processed food sector and also by increase in the conversation of milk into milk products. By 2010, the value of Indian dairy produce is expected to be Rs10,00,00 million. Presently the market is valued at around Rs7,00,000mn.

### **INTRODUCTION OF THE AMUL COMPANY**

AMUL is a dairy cooperative in the western India that has been primarily responsible, through its innovative practices, for India to become the world's largest milk producer. The distinctive features of this paradigm involves managing a large decentralized network of suppliers and producers, simultaneous development of markets and suppliers, lean and efficient supply chain,

and breakthrough leadership. Every day Amul collects 447,000 liters of milk from 2.12 million farmers, converts the milk into branded, packaged products, and delivers goods worth Rs 6 crore (Rs 60 million) to over 500,000 retail outlets across the country. To implement their vision while retaining their focus on farmers, a hierarchical network of cooperatives was developed, this today forms the robust supply chain behind GCMMF's endeavors. The vast and complex supply chain stretches from small suppliers to large fragmented markets.

Management of this network is made more complex by the fact that GCMMF is directly responsible only for a small part of the chain, with a number of third party players (distributors, retailers and logistics support providers) playing large roles. Managing this supply chain efficiently is critical as GCMMF's competitive position is driven by low consumer prices supported by a low cost system of providing milk at a basic, affordable price.

### **GUJARAT COOPERATIVE MILK MARKETING FEDERATION (GCMMF)**

GCMMF is India's largest food products marketing organization. It is a state level apex body of milk cooperatives in Gujarat, which aims to provide remunerative returns to the farmers and also serve the interest of consumers by providing quality products, which are good value for money. GCMMF markets and manages the Amul brand.

#### **➤ The distribution network**

Amul products are available in over 500,000 retail outlets across India through its network of over 3,500 distributors. There are 47 depots with dry and cold warehouses to buffer inventory of

the entire range of products. GCMMF transacts on an advance demand draft basis from its wholesale dealers instead of the Cheque system adopted by other major FMCG companies. This practice is consistent with GCMMF's philosophy of maintaining cash transactions throughout the supply chain and it also minimizes dumping. Wholesale dealers carry inventory that is just adequate to take care of the transit time from the branch warehouse to their premises. This just-in-time inventory strategy improves dealers' return on investment (ROI). All GCMMF branches engage in route scheduling and have dedicated vehicle operations.

#### **➤ Largest Cold Chain:**

AMUL has the largest cold chain network in India (i.e. 18000 refrigerators) as compared to any other company. The chemical components of milk are water, SNF and solids. Milk is very perishable product so it has to be consumed within 24 hours. In order to avoid wastage AMUL converts the milk in to SNF and milk solids by evaporating the water, which comprises up to 60- 70% of milk contents. This is possible only if the distribution channel right from the producer to the consumer is well organized. It will be

surprising to know that AMUL makes even the ‘Sarpanch’ to eat pizza i.e. it supplies pizzas even to rural market.



LogoTaglines.com

## **HISTORY**

milk per day. In the year 1955 AMUL was established. In the year 1946 the union was known as KAIRA DISTRICT CO-OPERATIVE MILKPRODUCERS' UNION. This union in the year 1946 the first milk union was established. This union was started with 250liters of selected the brand name AMUL in 1955.

The brand name Amul means “AMULYA”. This word derived from the Sanskrit word “AMULYA” which means “PRICELESS”. A quality control expert in an and had suggested the brand name “AMUL”. Amul products have been in use in millions of homes since 1946. Amul Butter, Amul Milk Powder, Amul Ghee, Amul spray, Amul Cheese, Amul Chocolates, Amul Shrikhand, Amul Ice cream, Nutramul, Amul Milk and Amulya have made Amul a leading food brand in India. (The total sale is Rs. 6 billion in 2005). Today Amul is a symbol of many things like of the high-quality products sold at reasonable prices, of the genesis of a vast co-operative network, of the triumph of indigenous technology, of the marketing savvy of a farmers' organization. And have a proven model for dairy development (Generally known as “ANAND PATTERN”).

In the early 40's, the main sources of earning for the farmers of Kiara district was farming and selling of milk. That time there was high demand for milk in Bombay. The main supplier of the milk was Polson dairy limited, which was a privately owned company and held monopoly over the supply of milk at Bombay from the Kiara district. This system leads to exploitation of poor and illiterates 'farmers by the private traders. The traders used to beside the prices of milk and the farmers were forced to accept it without uttering a single word.

However, when the exploitation became intolerable, the farmers were frustrated. They collectively appealed to Sardar Vallabhbhai Patel, who was a leading activist in the freedom movement. Sardar Patel advised the farmers to sell the milk on their own by establishing a co-operative union, instead of supplying milk to private traders. Sardar Patel sent the farmers to Shri Morarji Desai in order to gain his co-operation and help. Shri Desai held a meeting at Samarkha village near.

These village societies would collect the milk themselves and would decide the price at which they can sell the milk. The district union was also formed to collect the milk from such village co-ops and, on 4th January 1946. He advised the farmers to form a society for collection co-operative societies and to sell them. It was also resolved that the Government should be asked to buy milk from the union.

However, the govt. did not seem to help farmers by any means. It gave the negative response by turning down the demand for the milk. To respond to this action of govt., the farmers of Kaira district went on a milk strike. For 15 whole days not a single drop of milk was sold to the traders. As a result, the Bombay milk scheme was severely affected. The milk commissioner of Bombay then visited Anand to assess the situation. Having seen the condition, he decided to fulfill the farmers demand.

Thus their cooperative unions were forced at the village and district level to collect and sell milk on a cooperative basis, without the intervention of Government. Mr. Varghese Kurian showed main interest in establishing union who was supported by Shri Tribhuvandas Patel who led the farmers in forming the Co-operative

unions at the village level. The Kaira district milk producers union was thus established in ANAND and was registered formally on 14th December 1946. Since farmers sold all the milk in an and through a co-operative union, it was commonly resolved to sell the milk under the brand name AMUL.

At the initial stage only 250 liters of milk was collected every day. But with the growing awareness of the benefits of the cooperativeness, the collection of milk increased. Today Amul collect 11 lakhs liters of milk every day. Since milk was perishable commodity it becomes difficult to preserve milk for a longer period. Besides when the milk was to be collected from the far places, there was a fear of spoiling of milk. To overcome this problem, the union thought out to develop the chilling unit at various junctions, which would collect the milk and could chill it, so as to preserve it for a longer period. Thus, today Amul has more than 150 chilling centers in various villages. Milk is collected from almost 1073 societies. With the financial help from UNICEF, assistance from the govt. of New Zealand under the Colombo plan, of Rs. 50 million for factory to manufacture milk powder and butter was planned. Dr. Rajendra Prasad, the president of India laid the foundation on November 15, 1954. Shri Pandit Jawaharlal Nehru, the prime minister of India declared it open at Amul dairy on November 20, 1

## **THE BUSINESS MODEL**

From the very beginning, in the early 1950s, AMUL adopted the network as the basic model for long-term growth.

- The network explicitly includes secondary services to the farmer-suppliers.
- Several of the entities in the network are organized as cooperatives linked in a hierarchical fashion.

**Customers:** In comparison with developed economies, the market for dairy products in India is still in an evolutionary stage with tremendous potential for high value products such as ice cream, cheese etc. The distribution network, on the other hand, is quite reasonable with access to rural areas of the country. Traditional methods practiced in western economies are not adequate to realize the market potential and alternative approaches are necessary to tap this market.

**Suppliers:** A majority of the suppliers are small or marginal farmers who are often illiterate, poor, and with liquidity problems as they lack direct access to financial institutions. Again, traditional market mechanisms are not adequate to assure sustenance and growth of these suppliers.

**Third Party Logistics Services:** In addition to the weaknesses in the basic infrastructure, logistics and transportation services are typically not professionally managed, with little regard for quality and service. In addition to outbound logistics, GCMMF takes responsibility for coordinating with the distributors to assure adequate and timely supply of products. It also works with the Unions in determining product mix, product allocations and in developing production plans. The Unions, on the other hand, coordinate collection logistics and support services to the member-farmers. In what follows we elaborate on these aspects in more detail and provide a rationale for the model and strategies adopted by GCMMF.

**Simultaneous Development of Suppliers and Customers:** From the very early stages of the formation of AMUL, the cooperative realized that sustained growth for the long-term was contingent on matching supply and demand. The member-suppliers were typically small and marginal farmers with severe liquidity problems, illiterate and untrained. AMUL and other cooperative Unions adopted a number of strategies to develop the supply of milk and assure steady growth. First, for the short term, the procurement prices were set so as to provide fair and reasonable return. Second, aware of the liquidity problems, cash payments for the milk supply was made with minimum of delay. This practice continues today with many

village societies making payments upon the receipt of milk. For the long-term, the Unions followed a multipronged strategy of education and support. For example, only part of the surplus generated by the Unions is paid to the members in the form of dividend Managing

**Third Party Service Providers:** Unions focused efforts on these activities and related technology development. The marketing efforts were assumed by GCMMF. All other activities were entrusted to third parties. These include logistics of milk collection, distribution of dairy products, sale of products through dealers and retail stores, some veterinary services etc. It is worth noting that a number of these third parties are not in the organized sector, and many are not professionally managed. Hence, while third parties perform the activities, the Unions and GCMMF have developed a number of mechanisms to retain control and assure quality and timely deliveries. This is particularly critical for a perishable product such as liquid milk. **Coordination for Competitiveness:** Coordination is one of the key reasons for the success of operations involving such an extensive network of producers and distributors at GCMMF. Some interesting mechanisms exist for coordinating the supply chain at GCMMF.

**These mechanisms are:**

**Inter-locking Control** The objective for developing such an inter-locking control mechanism is to ensure that the interest of the farmer is always kept at the top of the agenda through its representatives who constitute the Boards of different entities that comprise the supply chain. This form of direct representation also ensures that professional managers and farmers work together as a team to strengthen the cooperative. This helps in coordinating decisions across different entities as well as speeding both the flow of information to the respective constituents and decisions.

**Coordination Agency: Unique Role of Federation** Its objective is to ensure that all milk that the farmers produce gets sold in the market either as milk or as value added products and to ensure that milk is made available to an increasingly large section of the society at affordable prices.

**Supplier Enhancement and Network servicing** Their objective is to ensure that producers get maximum benefit and to resolve all their problems. They manage the procurement of milk that comes via trucks & tankers from the VS. They negotiate annual contracts with truckers, ensure availability of trucks for procurement, establish truck routes, monitor truck movement and prevent stealing of milk while it is being transported.

**Amul Yatra Programme,** The Amul Yatra Programmed ensures that every new distributor visits Annand before commencing business, thereby imbibing an appreciation of Federation philosophy and culture as well as operational systems and processes. All new distributors' salesmen are trained in the Federation's philosophy and methods as well as in selling skills. Amul Yatra programme has been continuing to bring our channel partners to Amul to give them an exposure to our cooperative institutions. This year our emphasis was upon our newly appointed distributors and channel partners from various business segments like Organized Retail, Caterers etc.

### **ACHIEVEMENTS:**

Amul: Asia's largest dairy co-operative was created way back in 1946 to make the milk producer self-reliant and conduct milk-business with pride. Amul has always been the trend setter in bringing and adapting the most modern technology to door steps to rural farmers. Amul created history in following areas:

- a) First self-motivated and autonomous farmers' organization comprising of more than 5000000 marginal milk producers of Kiara District.
- b) Created Dairy co-operatives at village level functioning with milk collection centers owned by them.
- c) Computerized milk collection system with electronic scale and computerized accounting system.
- d) The first and only organization in world to get ISO 9000 standard for its farmer's co-operatives.
- e) First to produce milk from powder from surplus milk.

Amul is the live example of how co-operation amongst the poor marginal farmers can provide means for the socio-economic development of the under privileged marginal farmers

### **AWARDS**

Amul a co-operative society and its co-operation has led many different wards in its favor. Magsaysay award for community leadership presented in manila, Philippines to Shri Tribhuvandas Patel, Shri D N Khurody and Shri V. "Kurien

1964: "Padmabhusan" award given to Shri T.K. Patel

1965: “Padmshri awarded was given to V. Kurien, general manager, by the president of India

1987: “Best Productivity” awarded by national productivity council for the year 1985-86 awarded to Amul dairy.

1988: “Best Productivity” awarded for the second successive year 1986-87 by the president of India, Mr. R. Venkatrao to kaira union.

1993: “ICA” Memento towards genuine and self-sustaining co-operative worldwide ICA regional office for Asia and pacific,

New Delhi, 1996. 1999: G. B. Birla award. Moreover, the Amul union has achieved the prestigious ISO 9001-2000 and HACCP Certificate and effects are got to obtain ISO 1400.

### **AMUL COMPANY BRANCH IN ABROAD:**

Amul is going places. Literally. After having established its presence in China, Mauritius and Hong Kong, Gujarat Cooperative Milk Marketing Federation (GCMMF), India’s largest milk cooperative, is waiting to flood the Japanese market. Then, GCMMF is also looking at Sri Lanka as one of its next export destinations. Amul products are already available on shelves across several countries, including the US, China, Australia, West Asian countries and Africa. GCMMF recorded a turnover of Rs 2,922 crore last fiscal. Its products include pouch milk, ultra-heat treated (UHT) milk, ice-cream, butter, cheese and buttermilk.

### **PEOPLE POWER: AMUL'S SECRET OF SUCCESS**

The system succeeded mainly because it provides an assured market at remunerative prices for producers' milk besides acting as a channel to market the production enhancement package. What's more, it does not disturb the agro-system of the farmers. It also enables the consumer an access to high quality milk and milk product,

Contrary to the traditional system, when the profit of the business was cornered by the middlemen, the system ensured that the profit goes to the participants for their socio-economic uplift meant and common good. Looking back on the path traversed by Amul, the following features make it a pattern and model for emulation elsewhere. Amul has been able to: □ Produce an appropriate blend of the policy makers farmers board of management and the professionals: each group appreciating its roles and limitations, □ Bring at the command of the rural milk producers the best of the technology and harness its fruit for

betterment. □ Provide a support system to the milk producers without disturbing their agro-economic systems, □ Plough back the profits, by prudent use of men, material and machines ,in the rural sector for the common good and betterment of the member producers and The Union looks after policy formulation, processing and marketing of the milk, provision of technical inputs to enhance milk yield of animals, the artificial insemination service, veterinary care, better feeds and the like - all through the village societies. Basically the union and cooperation of people brought Amul into fame i.e. AMUL (ANAND MILK UNION LIMITED), a name which suggest THE TASTE OF INDIAN.

### **ADVERTISING BY AMUL**

Amul has two agencies that look after its entire range of products namely FCB Ulka and Da cuna FCB Ulka looks after a broad range of products namely, Amul Lite Breadsread, Amul Shrikhand, Amul Chocolates, Amul Paneer, Amul Snow Cap Softy Mix Ice cream, Amul/Sagar Ghee, Amul Infant Milk Formula 1 & 2, Sagar Tea and Coffee whitener, Amul Spray Infant Milk Food, Amul Mithae, Amul Gulab Jamun, Amulya Dairy Whitener, Mithaimate Sweetened Condensed Milk, Amul Ice cream, Sagar Skimmed Milk Powder and Amul Whole milk Powder.

### **PLANTS:**

First plant is at ANAND, which engaged in the manufacturing of milk, butter, ghee, milk powder, flavored milk and buttermilk



Second plant is at MOGAR, which engaged in manufacturing chocolate, nutramul, Amul Ganthia and Amul lite



Third plant is at Kanjari, which produces cattle fee.



Fourth plant is at Khatraj, which engaged in producing cheese.



Today, twelve dairies are producing different products under the brand name Amul. Today Amul dairy is no. 1 dairy in Asia and no. 2 in the world, which is matter of proud for Gujarat and whole India

## **PRODUCT LIST**

**Pure Ghee** Amul Pure Ghee •Sager Pure Ghee •Amul Cow Ghee

**U HT Milk Range** •Amul Shakti 3% fat Milk •Amul Taaza 1.5% fat Milk •Amul Gold 4.5% fat Milk •Amul Lite Slim-n-Trim Milk 0% fat milk •Amul Shakti Toned Milk •Amul Fresh Cream •Amul Snowcap Softy Mix Infant Milk Range •Amul Infant Milk Formula 1 (0-6 month) •Amul Infant Milk Formula 2 (6 months above) •Amul pray Infant Milk

**Food Milk Powders** •Amul Full Cream Milk Powder •Amulya Dairy Whitener •Sagar Skimmed Milk Powder

•Sager Tea and Coffee Whitener

**Fresh milk** •Amul Taaza Toned Milk 3% fat •Amul Gold Full Cream Milk 6% fat •Amul Shakti Standardized Milk 4.5% fat •Amul Slim & Trim Double Toned Milk 1.5% fat •Amul Saathi Skimmed Milk 0% fat •Amul Cow Milk

Sweetened Condensed Milk Amul Mithaimate Sweetened Condensed Milk

**Curd Products** •Yogi Sweetened Flavored Dahl (Dessert)•Amul Mast Dahi (fresh curd) •Amul Butter Milk •Amul Lasse Amul

**Ice creams** •Royal Treat Range (Rajbhog, Cappuccino, Choco chips, Butterscotch, Tutti Frutti) •Nut-o-Mania Range (Kaiju Drakshi, Kesar Pista, Roasted Almond, Kesar Carnival, Badshahi Badam Kulfi, Shista Pista Kulfi) •Utsav Range (Anjir, Roasted Almond) •Simply Delicious Range (Vanilla, Strawberry, Pineapple, Rose, Chocolate)

## **TYPES OF STORES**

### ➤ Cold store

The cold store is used for storing milk chhas, flavored milk, dahi etc. and many other products

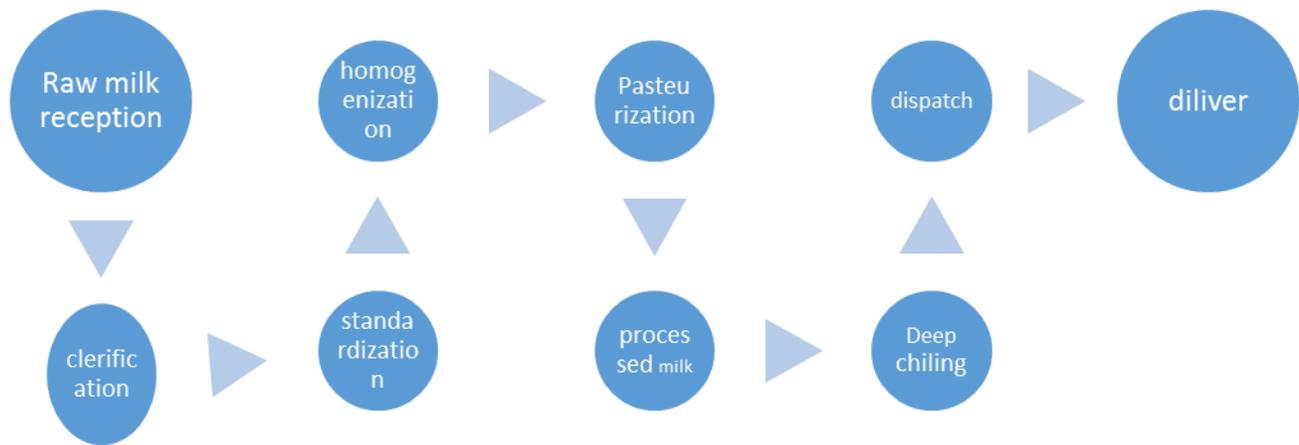
➤ **General store 1**

In this general store the veterinary product, machine, transportation, instruments, buckets, flavors for milk and Ice cream are stored here.

➤ **General store 2**

Here plastic of milk bags is store tins of ghee milk powder is store.

**PROCESS OF FLOW OF MILK**



➤ **Raw milk reception**

Raw milk received through included road rail tankers at a very low temperature thus retaining

The freshness of milk, the milk goes for more than 15 stringent quality tests before it is accepted for the processing of milk

Milk achieved from individual producers is checked for all basic quality parameters meeting the company specification and required norms at respective collection and chilling centers.

➤ **Clarification**

The chilled milk from the silos goes to the clarifier after pre heating. The clarifier spins the milk at very speed removing all the dust particles that are invisible to the naked eyes.

➤ **Standardization**

Milk from different breeds of cow and buffalo may vary in its composition. Hence to make milk uniform in composition before supply to the market it is standardized by raising or lowering its fat.

➤ **Homogenization**

In this process the milk is processed at very high pressure during which the large fat globules distributed in the milk and milk become whiter and thicker.

➤ **Pasteurization**

The milk is then pasteurized named after Louis Pasteur a French scientist who invented the process to use in which milk is heated to 72 degrees for 15 seconds and then cooling it down to 4 degrees.

## **IMPORTANCE AND SCOPE**

In the present research paper, a relationship between the designs of an organization with its operational efficiency indicators has been examined. It was found that these indicators play a very important role in the success of the organization. The factors were studied in the context to a co-operative form of organization and while comparing it with the corporate form, it was found that the design of the Amul structure is somewhat different as it believes in the federal form of structure each unit is independent of each other.

The study gives an insight on what kind of consumers use Flavor milk. It involves studying the reasons for likes /dislikes towards these Products. This involves studying the purchase and consumption behavior of respondents' consumers in specific to these Products. The study also gives insight on the retailing aspect for these Products with relation to the factors motivating the retailers to sell these Products in Particular to specific.

## **OBJECTIVES OF THE STUDY**

- To know how they can maximize their sale.
- To know about retailer as well as consumer satisfaction level
- To know awareness of people towards Amul products
- To know the factors which affects consumer's buying behavior while purchase milk
- To study various factors such as quality, price, easy available etc. Is influencing lot and influences positively

## LITERATURE REVIEW

**Lambert and Cooper, (2000)** believe the identification of chain members, critical to link with, and the processes needing linkage, are part of the implementation of supply chain management, aiming at creating the most value for the entire supply chain network. As seen by Chandra and Kumar (2000), supply chain management, turns out to be a way of improving competitiveness through the reduction of uncertainty and the enhancement of customer service. In addition, Mentzer et al., (2001) postulate that supply chain management is the strategic managerial tool to effectively manage the total flow of inventory from the ultimate supplier to the ultimate customer, which is also important in building capabilities for customization which promises sustainable customer satisfaction

**According, (2004)**, the supply chain management processes exist in both service and manufacturing organizations, although the managerial complexity of the chain might vary greatly from industries and different firms. Chopra and Meindl (2003) have their views processes performed in supply chain management as cycle view which defines the processes and flow as an essential element for operational decisions. The importance of understanding the sequence of processes and flows in a supply chain is a strong prerequisite to clearly understand the operational requirement and to fulfill the customer's needs. Kleindorfer & Van Wassenhove, (2004) view supply chain management as a process of integrating several business entities consisting of suppliers, manufacturers, distributors, retailers and customers. These integrated entities are important in managing the flow of resources (Sprague & Callarman, 2010) such as material flows (products, servicing, recycling), information flows (order transmission and tracking, and, coordination of physical flows), and financial flows (credit terms, payment schedules, and, consignment arrangements). Hence, all information is available to all participants in the supply chain as operating an integrated supply chain requires continuous information flows that assist in creating the optimum product flow (Hadaya & Pellerin, 2010; Mouritsen, Skjøtt-Larsen, & Kotzab, 2003).

**Sha, Chen & Chen, (2008)** detailed that supply chain encompasses totality of functions and stages in the chain to target the same goal of fulfilling customer needs. In a similar endeavour towards defining supply chain, Lejeune & Yakova, (2005) distinguishes supply chain concept and meaning, among them are communicative (characterized by slight dependence among supply chain members, cross-function integration), coordinated (characterized by prominent dependence, lead organization), collaborative (slight interdependence, common supply chain goals) and competitive (prominent interdependence, cooperation) supply chains. These basically depict the development or evolutionary stages of supply

chains. For example, Mentzer et al., (2001) describe the communicative supply chain as one that exists, but is not managed. This is a reflection of early stages of supply chain development, as it involves short-term (as needed) relationships and the chain can change into any of the three initially discussed supply chain types. With realization of benefits, the chain will definitely develop into higher stages (Quesada, et al., 2010). The approach to manage the supply chain is an additional area that needs to be explored (Cambra-Fierro & Ruiz-Benitez, 2011).

## **RESEARCH METHODOLOGY OF THE STUDY**

Once the project was assigned to me, I started by preparing a questionnaire. The purpose of the survey was to discover answers to the questions through application of a scientific procedure. The main aim of the survey was to find out the truth, which is hidden and which has not been discovered yet. The survey involves collection of secondary and primary data. In primary data we collect the information on the basis of two questionnaires, one for the customer and the second is designed for the retailers to get the perspective from all the angles

**Step 1. CONSUMER PRIMARY DATA** This data was collected through a survey using a questionnaire where the basic purpose was to understand buying habits and perception of consumers and customers towards these products

**Step 2. SECONDARY DATA** was collected using World Wide Web resources. This involved searching all the information about the competitors' products in terms of image created, product range, attributes and pricing

- Sample Unit: People who buy milk available in retail outlets, superstores, etc3. Sample size 50

The collected data were not easily understandable, so I like to analyze the collected data in a systematic manner and interpreted with simple method.

The analysis and interpretation of the data involves the analyzing of the collected data and interpretation it with pictorial representation such as bar charts, pie charts and others.

## **DATA COLLECTION**

### **SUPPLY CHAIN OF AMUL DAIRY**

- Supply of inputs for dairying in form of fodder, animals feed plant, veterinary aids for the animal
- Milk is taken out from the milching animal on the daily basis by the dairy farmer
- Collection of milk by collection center (various milk cooperation societies)
- Milk collected by cooperative societies are send to the dairy plant where chilling of milk processing and packaging of milk and milk product, transportation of milk and milk product is carried out
- The transportation of chilling milk and milk product from one place to another is done through the means of refrigerated vans, or in insulated milk tankers
- Final processed milk and milk product are transported to various retail outlets. Supermarkets and to retail's markets from where the processed milk and milk product finally reached to their end costumers.

### **ISSUES AND CHALLENGES IN VALUE CHAIN**

- Meeting seasonal spikes in demand and ability to measure the quality of procured milk at the source
- Complex logic of payments to producers based on fat solid nonfat and quality of milk received.
- Keeping track of truck and tanker routes as well as capability for viewing monitoring and payment based on route or distance.
- Visibility in to the shelf life and stock outs of raw material.

## DATA ANALYSIS AND INTERPRETATION;

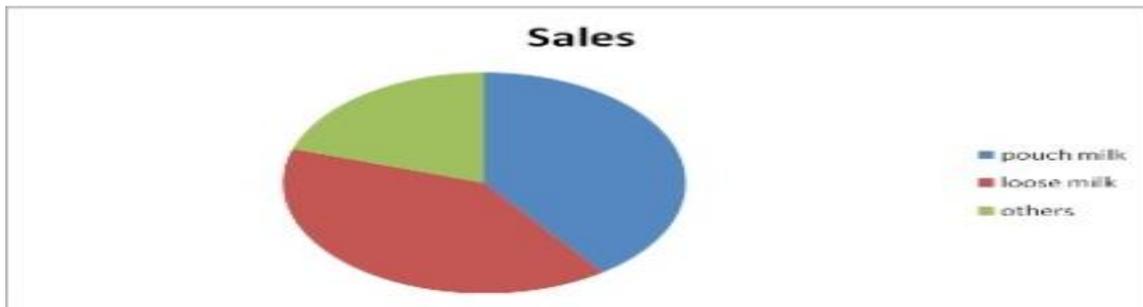
The collected data were not easily under stainable so I like to analyze the collected data in the systematic manner and interpreted with the simple method.

The analysis and interpretation of the data involves and analyzing of the collected data and interpretation it will be show picture and chart,

1) Which milk do you consume?

- a. Pouch milk
- b. Loose milk
- c. both

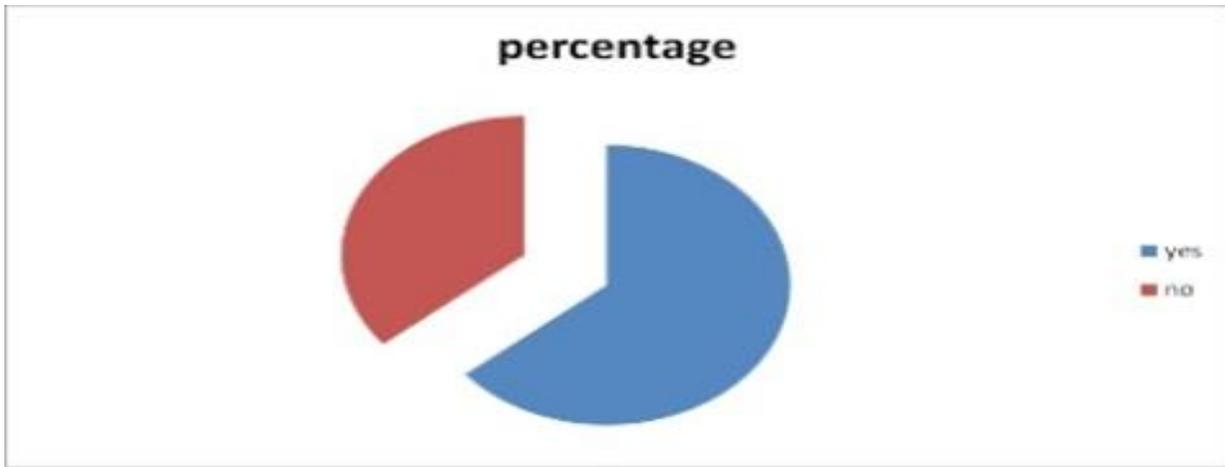
| Option     | No of Response | % of Response |
|------------|----------------|---------------|
| Pouch milk | 20             | 40            |
| Loose milk | 20             | 40            |
| Both       | 10             | 20            |
|            |                |               |



2) Are u satisfied with the milk you are consume?

- a) Yes
- b) No

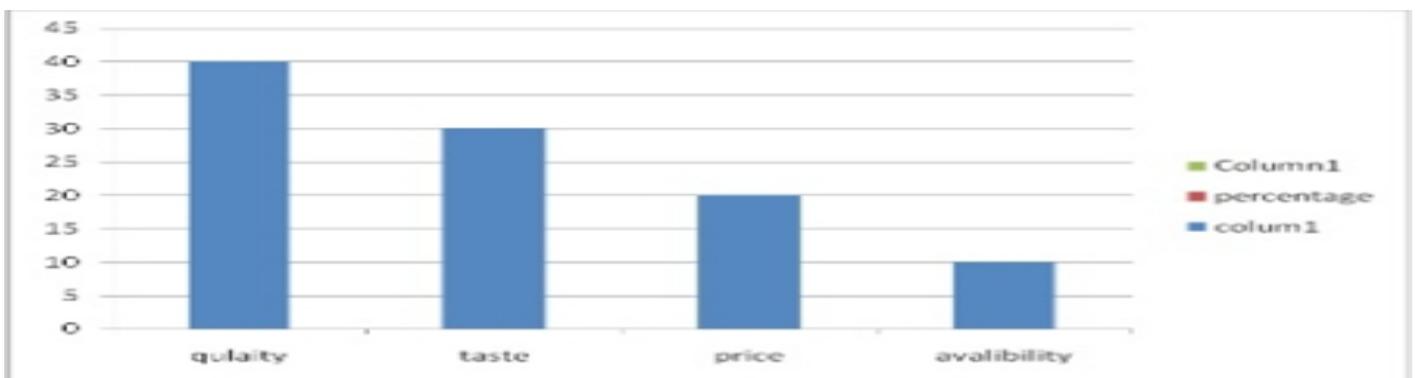
| Response | No. of Responded | % of Responded |
|----------|------------------|----------------|
| YES      | 32               | 18             |
| No       | 64               | 36             |



3) What do you like?

- a) Quality
- b) Taste
- c) Price
- d) Availability

| Factors      | No of Response | % of Response |
|--------------|----------------|---------------|
| Quality      | 20             | 40            |
| Teste        | 15             | 30            |
| Price        | 10             | 20            |
| Availability | 5              | 10            |

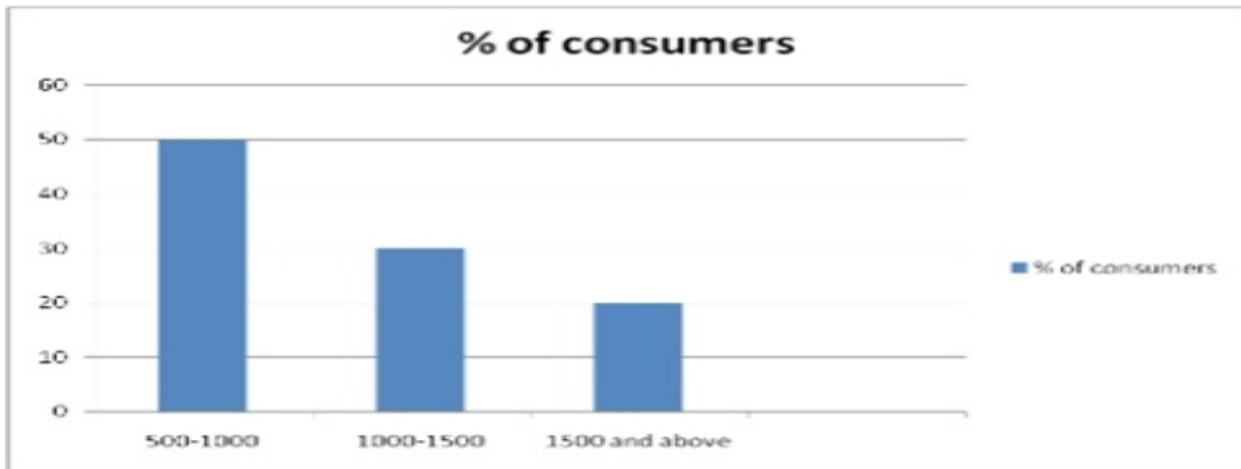


4) What is your monthly expenditure in milk (in Rs.)?

- a) 500-1000

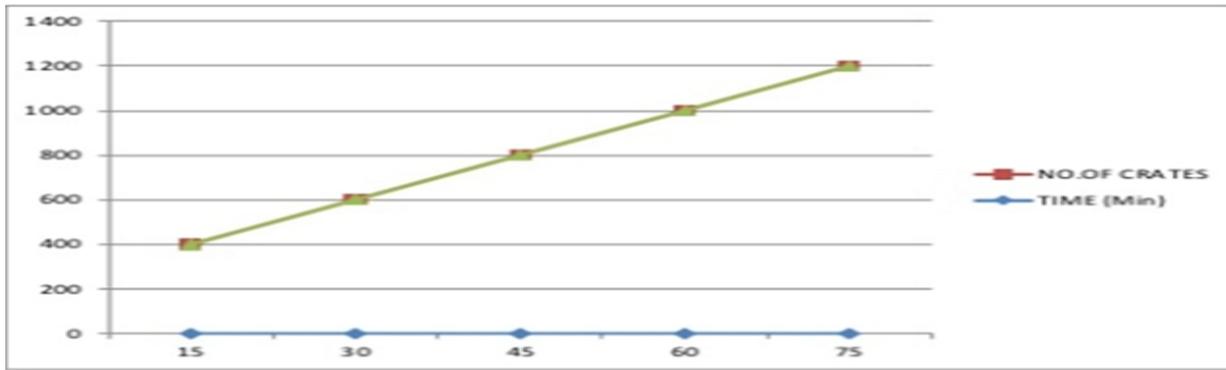
- b) 1000-1500
- c) 1500 and above

| Response       | No of Response | % of consumers |
|----------------|----------------|----------------|
| 500-1000       | 25             | 50             |
| 1000-1500      | 15             | 30             |
| 1500 and above | 10             | 20             |



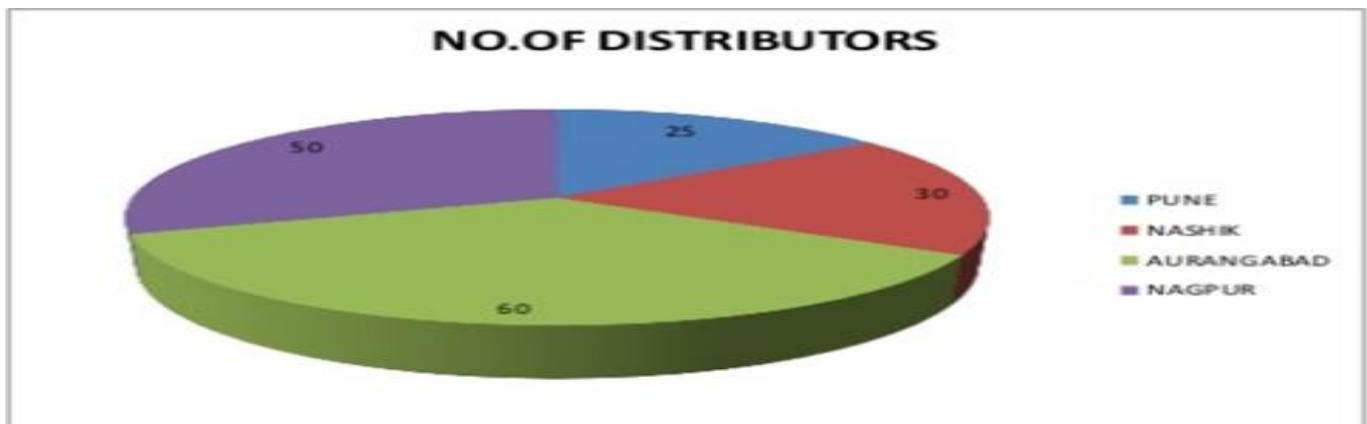
5) Loading and unloading time calculation?

| Time (min) | No of Labor | No of crates truck |
|------------|-------------|--------------------|
| 15         | 4           | 400                |
| 30         | 4           | 600                |
| 45         | 4           | 800                |
| 60         | 4           | 1000               |
| 75         | 4           | 1200               |



6) Calculation of kilometers from manufacture point to drop point of the distributors?

| No of trucks | Location   | No of Distributers |
|--------------|------------|--------------------|
| 1            | Pune       | 25                 |
| 2            | Nasik      | 30                 |
| 3            | Aurangabad | 50                 |
| 4            | Nagpur     | 60                 |



7) Tanker for collective centers?

| No of cooperative society | Milk Procurement(liter) |
|---------------------------|-------------------------|
| Daal                      | 1296                    |
| Chas                      | 1759                    |
| Saigoan                   | 1986                    |
| Gargoatewadi              | 1456                    |
| Neherewadi                | 1585                    |

|         |      |
|---------|------|
| Agavadi | 1090 |
| Total   | 9172 |

8) If you buy AMUL milk pouch which pack you Purchas?

A AMUL GOLD

B AMUL TAAZA

C AMUL SLIM AND TRIM

| Response           | No Of Responded | % of Consumer |
|--------------------|-----------------|---------------|
| Amul gold          | 25              | 50            |
| Amul Taaza         | 15              | 30            |
| Amul slim and trim | 10              | 20            |

9) Consumer opinion towards product?

A poor

B average

C good

D excellent

| Rating    | No of Respondent | % of Consumers |
|-----------|------------------|----------------|
| poor      | 15               | 30             |
| average   | 25               | 15             |
| good      | 7                | 14             |
| excellent | 3                | 6              |

The post analysis findings have been enumerated in the same flow/sequence in which the questionnaire was administered with the help of the above research work and fact collection it was analyzed that though the Amul Milk Products like Amul flavored Milk, Lasse Spiced Butter Milk, Choco zoo Chocolate have

a high potential and a large market to be captured but still they are lacking in the acceptability among the consumers due to few loop holes in their marketing state.

\

## CONCLUSION

Amul is playing a vital role in serving the rural class and contribution for the economic upliftment of farmers. It is helping the farmers by giving them all facilities to rural people by supplying fodder and feed, improving the breed by artificial insemination with the help of their veterinary services. AMUL is reaping profit by equipping the latest technology and producing better quality product. It is serving the best quality milk and milk product to its customers.

Thereby maintaining them to position in the market. It has atomized manufacturing and every process is computerized. In other words, through automation it has achieved great success and a good recognition, AMUL provides a number of lessons for such organizations to compete successfully in the face of increasing globalization and competition. More generally, the AMUL case presents a successful model for operating in emerging economies characterized by either large under-developed suppliers and/or markets with high potential.

It was concluded that the Amul milk products i.e. Amul Flavored Milk, Lasse, Spiced Butter Milk and Choco Zoo Chocolate, though are known to its customers & consumers but still their acceptance is favorably low as compared to other local brands present in the market. Therefore, measures in terms of reach & availability and efficient sales promotion are to be undertaken to enhance sales and acceptability among the end user. There is very low awareness regarding Amul Lasse and Choco Zoo Chocolate among the consumers. So, there should be proper advertisement and sales promotion activities by the company to capture good market share for these products and to enhance their awareness level, which is very low among the consumers and also retailers.

## **LIMITATIONS OF THE STUDY**

The limitations of the research were as follows

- 1 Lack of proper experience on the part of the researcher in conducting such studies in the past.
- 2 Time frame required was not enough to survey more number of outlet.
- 3 Dealers and farmers either have limited or lack of time or no interested, so that sometimes they could not give proper response.
- 4 Dealers are least interested because of lack of time.
- 5 It might also be so that some respondents were not motivated enough to respond proper although full attempt was made to keep it as unbiased as poss.

## **FINDINGS OF THE STUDY**

- 1 Direct milk bill payment to farmers After every 10 days cycle payment  
Has made to farmers
- 2 produce meeting to be conducted at DCS level for the better transparency and improvement  
In trust level.
- 3 Amul focus on that to maintaining good rates in flush season.
- 4 Random visit of quality person to attend the reception, collection of doubtful samples and adulteration test. All per strictly monitored for good since.
- 5 veterinary service started at all target area.
- 6 Amul provides ideas good quality of cattle feed to Amul milk production.
- 7 Bonus to milk producer for year 2014-15. Distributed near about 7 core rupees farmer on bank.
- 8 Amul provided milk adulteration kit at per level. It help to know identify the milk adulteration at per.
- 9 FSSAL license to societies. All the per have applied for food and drugs license

## RECOMMENDATION

### **For company**

- AMUL should maintain the good relationship with the farmers, co-operative societies

And distributors.

- More focus on milk procurement and maintain quality milk product.
- The distributors are also facing the problem of dumping which make it impossible for them to forecast and give order for the next day as they currently have extra stock.
- The distributors of Amul should not be allowed to keep other milk products. And even if they maintain the same, they should be punished.
- Certain schemes need to entertain to the milk distributors shall be given so as to motivate them and increase our sales.
- Trucks which are used for transport of AMUL POUCH MILK should be washed regularly.
- Company should try to make available their product at all most retailers shops by improving their distribution channel.
- Satisfaction level of customers should be raised by providing good quality product a low price, and should try to remove reasons for dissatisfaction of customers.
- Feedback, suggestion and complaints should be revised by Amul if they are appropriate and good. It should also try to take action for implementation.

### **For Consumer Market**

- POP should be available in retail stores so that consumers know about the availability of the product.
- Few cooking websites could be asked to promote these products.
- Amul should have better presence especially in the places where different local Brands seem to be leading in sales.
- In areas where Amul is the leader should never be out of stock.

- Amul should have better visibility in order to increase the awareness and make use of the local media like dailies, radio and T.V. (especially during the daily program at night since most of the buying influence i.e. the housewives observed during this time).
- Amul should have a quality check done to see if the taste can be improved. □ More use of promotional activities should happen the convenience attribute. □ “Amul Milk Products are hygienic” type of statements needs to be communicated through its advertisements<sup>33</sup>

### **For Retailer Market**

- Amul should have a system by which it can take care of its delivery problems so that it can take care of problems arising from stocks close to the expiry dates.
- Timely visits should be given to the retail shops. Representatives should take feedback regarding the supplies and quality issues.
- Company should supply their product as per manufacturing date.
- Amul should offer more incentives to the retailers mostly for the display because many respondents look around for alternative themselves. Hence Amul has to be more visible.
- More sales –More incentive concept should be applying.
- The salesman should be able to solve issues related to sales, supplies and stocks amicably.
- Need of more communication between retailer and salesman.
- Should provide replacement of the spoiled products to the retailers.

Should improve its distribution channel & chain by increasing the no. of distributors.

## **REFERENCE**

### **WEBLOGRAPHY**

WWW.AMUL.COM

WWW.WIKIPEDIA/ORG

WWW.GOOGLEMAPS/COM

### **BIBLOGRAPHY**

SUPPLY CHAIN MANAGEMENT AND LOGISTIOC BOOK

(VIPUL PUBLICATION)

## ANNEXURE

### QUESTIONNAIRE OF AMUL MILK PRODUCT

NAME \_\_\_\_\_.

AGE \_\_\_\_\_

GENDER \_\_\_\_\_

### PROFIL (FARMER, RETLIR, SUPPLIR, CUSTOMER)

1) Which milk do you consume?

- A. pouch milk
- B. loose milk
- C. both

2) Are you satisfied with the milk you are consume?

A yes

B no

3) What do you like?

A quality

B taste

C price

D availability

4) Your monthly expenditure in milk (in Rs.)?

A 500-1000

B 1000-1500

C 1500 above

5) Loading and unloading of time calculation?

ANS \_\_\_\_\_

6) Calculation of kilometers from manufacture plant to drop point of the distributors?

ANS \_\_\_\_\_.

7) NUMBER Of tankers for collective centers?

ANS \_\_\_\_\_.

8) If you buy AMUL milk pouch which pack you purchase?

A Amul gold

B Amul Taaza

C Amul slim and trim

9) what are your suggestion expectation from AMUL?

ANS \_\_\_\_\_

10) Consumer opinion towards product?

A poor

B average

C good

D excellent