

**Thesis Paper**  
**on**  
**Supply Chain Management Practice in the Pharmaceutical Industry of**  
**Bangladesh:**  
**A case Study on Delta Pharma Ltd.**

**Submitted To**  
Department of Business Administration  
Faculty of Business  
Sonargaon University (SU)  
Dhaka-1215

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Semester: Fall 2025  
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Submitted for The Partial Fulfilment Requirement of the Degree of Masters of Business  
Administration

**Date of Submission: January 03, 2026**

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## **Letter of Transmittal**

3<sup>rd</sup> January 2026

To,  
Shahnaz Sharmin  
Lecturer  
Department of Business Administration  
Sonargaon University

Subject: Submission of Thesis Paper.

Dear Madam,

With due respect, it is my great pleasure to submit my thesis paper on Delta Pharma Limited entitled “Supply Chain Management Practice in the Pharmaceutical Industry of Bangladesh: A Case Study on Delta Pharma Ltd.” This report has been prepared as a partial requirement for the completion of the Master of Business Administration (MBA) degree.

I have made every effort to collect relevant data and information on the supply chain practices of the pharmaceutical industry in Bangladesh. Throughout the preparation of this report, I have applied the knowledge and skills gained through my professional experience at Delta Pharma Ltd.

I sincerely hope that this report will meet your expectations and academic standards. Although I have tried my best to make the report informative, comprehensive, and well-organized, any unintentional errors or shortcomings are entirely my own.

I am truly grateful to you for your valuable supervision, continuous guidance, and kind support throughout the preparation of this report. I, therefore, earnestly request you to accept this report with your kind approval.

Sincerely Yours,

Shahidul Islam  
MSCM2101022007  
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## **Letter of Acceptance**

This is to certify that Shahidul Islam, ID No: MSCM2101022007, Department of Business Administration, has completed his thesis paper titled “Supply Chain Management Practice in the Pharmaceutical Industry of Bangladesh: A case Study on Delta Pharma Ltd.” under my supervision as a part of partial requirement for obtaining Masters of Business Administration (MBA) degree in SCM.

This report can be accepted for evaluation.

.....  
Shahnaz Sharmin  
Lecturer  
Department of Business Administration  
Sonargaon University

## **Student Declaration**

I, Shahidul Islam, a student of MBA IN SCM, Department of Business Administration, Sonargaon University, do hereby declare that the Thesis paper titled “Supply Chain Management Practice in the Pharmaceutical Industry of Bangladesh: a case study on Delta Pharma Ltd.” is the outcome of practical work on this topic mentioned above under the supervision of Shahnaz Sharmin, Lecturer Department of Business Administration, Sonargaon University, Bangladesh.

I also declare that this report is an original work and no part of this report has been copied from elsewhere. In addition, I would also like to mention that this report has not been published or submitted for being published or submitted for awarding any degree, diploma or recognition.

Sincerely Yours,

Shahidul Islam  
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## **Acknowledgement**

At the very outset, I would like to express my sincere gratitude to my honorable academic supervisor Shahnaz Sharmin, Lecturer, Faculty of Business, Sonargaon University, for her continuous guidance, valuable suggestions, and encouragement throughout the preparation of this report.

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I would also like to express my appreciation to all those who shared their insightful articles, research papers, and professional experiences through various websites and publications. Their contributions have been instrumental in shaping and enriching the content of this report.

Special thanks to the Supply Chain Team of Delta Pharma Ltd., whose practical guidance and cooperation helped me to understand real-world supply chain practices. I am truly thankful for their positive attitude, continuous assistance, and willingness to share their knowledge, all of which greatly contributed to the successful completion of this report.

Finally, I would like to convey my heartfelt gratitude to my family members and close friends for their unconditional support, patience, and encouragement during the preparation of this report. Their continuous motivation and belief in my abilities inspired me to stay focused and complete the work with dedication. Without their mental and moral support, this journey would have been much more difficult to accomplish.

Sincerely Yours,

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## **Abstract**

Supply chain management includes a number of linked processes that begin with the acquisition of raw materials, continue through their transformation into finished products, and end with the effective distribution of the finished products to customers via distribution networks. The supply chain of a pharmaceutical company involves forecasting, procurement, logistics, operations, inventory management, transportation, warehouse, distribution, customer service etc. However, it is not easy to develop a standard model of supply chain management in a business organization.

Delta Pharma Ltd. is a reputed pharmaceutical company of Bangladesh and stands out as a prominent producer and exporter of pharmaceutical products. The report includes assessment of the supply chain management system of Delta Pharma Ltd. This assessment will help the organization to develop an effective supply chain management system to obtain better performance, customer satisfaction, product quality, supplier performance, material flow integration, manufacturing machinery efficiency, and information management. The analysis will help the business to improve its plans, which eventually helps it achieve an enhanced competitive advantage. The objective of this study is to assess the extent to which the supply chain of NJPL functions; to understand its supply chain management; to identify the barriers and challenges of the NJPL supply chain; to make recommendations for overcoming the challenges and to improve supply chain management system.

In a highly competitive and regulated business, an efficient supply chain management system is essential to its success. Quality control, inventory control and cost effectiveness are the strengths of the DPL supply chain system which results in customer satisfaction and risk reduction. The pharmaceutical sector is a heavily regulated sector and it can be difficult to comply with many regulatory standards, such as Good Manufacturing Practices (GMP), Good Distribution Practices (GDP), and other national and international laws. Contamination, fake goods, temperature-sensitive goods, forecast errors etc.

May cause supply chain interruptions of DPL and may decrease the efficiency of the supply chain system. The resilience, effectiveness, and sustainability of Delta Pharma Ltd supply chain may be improved by tackling the challenges and putting the suggested measures into practice. This will put the business in a better position to adapt to changing market conditions, boost customer happiness, and guarantee the company's long-term development and profitability.

## **List of Abbreviations**

API	: Active Pharmaceutical Ingredient
CRM	: Customer Relationship Management
CSM	: Customer Service Management
CSR	: Corporate Social Responsibility
EMA	: European Medicines Agency
ERP	: Enterprise Resource Planning
FDA	: Food and Drug Administration
GMP	: Good Manufacturing Practices
GOB	: Government of Bangladesh
HCP	: Healthcare professional
MRP	: Material Requirements Planning
DPL	: Delta Pharma Ltd.
SRM	: Supplier Relationship Management
SCD	: Supply Chain Development
SOP	: Standard operating procedure
WHO	: World Health Organization.
HRM	: Human Resource Management

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# **Chapter-1: Introduction**

## **1.1 Supply Chain Management**

Keith Oliver first defined the concept of Supply Chain Management (SCM) in 1982 as follows:

“Supply chain management is the process of planning, implementing, and controlling the operations of the supply chain with the purpose of satisfying 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.”

For supply chain management to be effective, every step of the process must be carefully planned and executed. It includes selecting suppliers, managing relationships with them, forecasting demand, and ensuring that inventory levels remain optimal to meet customer needs.

Two major components of SCM are logistics and inventory management. Logistics focuses on the movement of goods from one location to another, whereas inventory management involves tracking and controlling the flow of materials into and out of warehouses and distribution centers. Both functions are crucial for maintaining operational efficiency and customer satisfaction.

In essence, supply chain management refers to the supervision of the entire flow of goods and services, encompassing all processes that transform raw materials into finished products. It aims to maximize customer value and create a sustainable competitive advantage in the market by strategically optimizing an organization’s supply-side operations.

### **1.1.1 Five Stages of Supply Chain Management**

Supply chain management can generally be divided into five interrelated stages: Plan, Source, Make, Deliver, and Return.

Each stage plays a vital role in ensuring that the entire supply chain operates efficiently and effectively from start to finish.

## **1. Plan**

The planning stage involves designing strategies to meet customer demand and avoid shortages. Organizations utilize supply chain analytics, forecasting models, and materials management tools within ERP systems to balance supply and demand. Proper planning helps determine production capacity, resource allocation, and inventory levels to ensure a smooth supply chain flow.

## **2. Source**

In this stage, organizations identify, evaluate, and select suppliers who can provide the necessary raw materials or components in a cost-effective and reliable manner. Supplier relationship management and collaboration begin here and continue throughout the supply chain process. The success of the supply chain largely depends on the reliability and efficiency of its suppliers.

## **3. Make**

This is the production phase, where the actual manufacturing of products takes place. It includes activities such as production scheduling, quality testing, compliance assurance, packaging, storage, and product release. In large-scale operations, multiple machines and advanced technologies like the Internet of Things (IoT) and Artificial Intelligence (AI) are often used to improve productivity, maintain quality, and enhance operational efficiency.

## **4. Deliver**

The delivery stage, also known as the logistics phase, focuses on distributing the finished goods to customers through various transportation channels. This includes order management, warehousing, shipment tracking, and coordination with logistics partners to ensure on-time delivery and customer satisfaction.

## **5. Return**

The final stage, return, manages all activities related to product returns - including damaged, defective, or unsatisfactory goods. This stage also integrates processes from earlier stages such as inventory control and transportation management. Effective return management helps improve customer trust, reduce waste, and promote sustainability within the supply chain. [3]

### **1.1.2 The Functions of Supply Chain Management**

The functions of Supply Chain Management (SCM) encompass a wide range of activities that ensure the efficient flow of goods, information, and finances throughout the entire production and distribution process.

The ultimate objective of these functions is to deliver the right product, in the right quantity, to the right place, at the right time, and at the lowest possible cost.

Broadly, the key functions of SCM can be categorized as follows:

#### **1. Procurement and Sourcing:**

This function involves identifying, evaluating, and selecting reliable suppliers who can provide high-quality raw materials or components at competitive prices. It also includes negotiating contracts, maintaining supplier relationships, and ensuring timely delivery of materials to meet production schedules.

#### **2. Production and Operations Management:**

Once materials are sourced, the production function focuses on converting them into finished goods through efficient manufacturing processes. This includes production planning, process optimization, quality control, and capacity utilization. Effective production management helps reduce waste, control costs, and maintain product quality.

#### **3. Inventory Management:**

Inventory management ensures that there is an adequate balance between supply and demand. It involves determining optimal inventory levels, tracking stock movement, minimizing holding costs, and avoiding both stockouts and overstock situations.

Advanced tools like ERP systems and Just-in-Time (JIT) techniques are often used to streamline this process.

#### **4. Logistics and Distribution:**

This function deals with the physical movement of goods from suppliers to manufacturers and from manufacturers to customers. It includes transportation planning, warehousing, order fulfillment, packaging, and shipment tracking.

Efficient logistics management ensures on-time delivery and enhances customer satisfaction.

## **5. Demand Forecasting and Planning:**

Accurate demand forecasting helps organizations plan production, procurement, and distribution more effectively. It relies on market analysis, historical data, and predictive analytics to anticipate future demand trends and align resources accordingly.

## **6. Information Flow and Coordination:**

Smooth and timely communication across all supply chain partners is critical for success. This function includes the sharing of real-time data regarding inventory, production, and distribution activities. Technologies such as Enterprise Resource Planning (ERP) and Supply Chain Information Systems (SCIS) facilitate this coordination and improve decision-making.

## **7. Customer Relationship and Service Management:**

Customer satisfaction is a key goal of SCM. This function focuses on understanding customer needs, handling feedback, managing returns, and ensuring after-sales service. Building long-term customer relationships enhances brand loyalty and business growth.

## **8. Performance Measurement and Continuous Improvement:**

This function emphasizes monitoring supply chain performance using Key Performance Indicators (KPIs) such as cost efficiency, lead time, order accuracy, and service level. Continuous improvement initiatives like Lean Management and Six Sigma help maintain competitiveness and sustainability.

In summary, the various functions of supply chain management work collectively to ensure that products flow smoothly from suppliers to end-users, while maintaining cost efficiency, quality assurance, and customer satisfaction.

### **1.1.3 Role of Supply Chain Management**

The role of Supply Chain Management (SCM) in modern business operations is both strategic and operational. It serves as the backbone of organizational efficiency, linking every stage of the product life cycle - from sourcing raw materials to delivering finished goods to customers.

SCM plays a vital role in enhancing customer satisfaction, minimizing operational costs, and creating sustainable competitive advantages in the marketplace.

The major roles of supply chain management can be summarized as follows:

### **1. Integrating Key Business Functions:**

SCM integrates multiple functional areas such as procurement, production, logistics, marketing, and customer service. Through effective coordination, it ensures that all departments work together seamlessly to meet organizational objectives. This integration enhances communication, reduces redundancy, and improves overall productivity.

### **2. Enhancing Customer Satisfaction:**

One of the primary roles of SCM is to ensure that customers receive the right products, in the right condition, at the right time. By maintaining product availability and delivery accuracy, SCM directly contributes to customer loyalty and retention, which are essential for long-term business success.

### **3. Reducing Operational Costs:**

Efficient supply chain operations help minimize production, inventory, and transportation costs. Through better resource utilization, inventory optimization, and process automation, SCM enables companies to operate more efficiently while maintaining profitability.

### **4. Ensuring Quality and Compliance:**

SCM ensures that quality standards are maintained throughout the supply chain process - from raw material sourcing to final delivery. It also helps organizations comply with legal and regulatory requirements, which is particularly important in industries like pharmaceuticals, food, and healthcare.

### **5. Facilitating Information Flow and Collaboration:**

Effective supply chain management ensures real-time communication between suppliers, manufacturers, distributors, and retailers. By promoting transparency and collaboration, it helps organizations respond quickly to market fluctuations and changing customer preferences.

### **6. Promoting Sustainability and Risk Management:**

Modern supply chains emphasize sustainable practices such as waste reduction, eco-friendly sourcing, and ethical labor practices. SCM also plays a crucial role in identifying potential risks - such as supplier failures, logistics disruptions, or geopolitical issues - and developing contingency plans to mitigate their impact.

## **7. Supporting Strategic Decision-Making:**

Through accurate data analysis and forecasting, SCM provides valuable insights that guide strategic decisions regarding production planning, capacity management, and market expansion. This helps organizations remain competitive and adaptive in dynamic market environments.

In summary, the role of supply chain management extends beyond logistics and production. It acts as a **strategic enabler** that drives operational excellence, customer satisfaction, and long-term organizational growth by ensuring efficiency, transparency, and sustainability across all supply chain activities.

### **1.1.4 Importance of Supply Chain Management**

In today's competitive and rapidly changing business environment, Supply Chain Management (SCM) has become a critical factor in determining an organization's success. It ensures the smooth flow of materials, information, and finances across the entire value chain - from suppliers to end customers. An efficient supply chain enables companies to reduce costs, improve customer satisfaction, and achieve long-term sustainability. The importance of SCM can be explained through the following key points:

#### **1. Enhancing Operational Efficiency:**

SCM helps organizations streamline their operations by coordinating every stage of production and distribution. Through efficient planning, resource utilization, and process optimization, it eliminates redundancies and minimizes waste. As a result, companies can deliver products faster and at a lower cost.

#### **2. Reducing Costs and Increasing Profitability:**

One of the main benefits of SCM is cost reduction. Effective inventory management, optimized logistics, and strategic sourcing help minimize production and transportation expenses. By maintaining the right balance between demand and supply, organizations can avoid both excess inventory and stockouts, thereby increasing profitability.

#### **3. Improving Customer Satisfaction:**

Customer satisfaction lies at the heart of SCM. By ensuring on-time delivery, maintaining product quality, and providing consistent service, SCM strengthens customer trust and loyalty. Satisfied customers not only lead to repeat purchases but also enhance the company's brand reputation in the market.

#### **4. Facilitating Better Coordination and Communication:**

A well-designed supply chain improves collaboration among suppliers, manufacturers, distributors, and retailers. Real-time information sharing helps in quick decision-making and allows the organization to respond effectively to changes in demand, market trends, or disruptions.

#### **5. Supporting Strategic Decision-Making:**

SCM provides managers with critical data and insights regarding production, inventory, and market demand. These insights help in making informed decisions related to forecasting, procurement, and capacity planning, thereby strengthening the company's strategic positioning.

#### **6. Promoting Innovation and Competitiveness:**

Efficient supply chains encourage innovation in processes, technology, and service delivery. By adopting automation, artificial intelligence (AI), and data analytics, organizations can improve accuracy, flexibility, and responsiveness - which are key to maintaining competitiveness in global markets.

#### **7. Ensuring Business Continuity and Risk Management:**

A resilient supply chain can anticipate and manage potential disruptions caused by supplier failures, natural disasters, or geopolitical factors. SCM enables organizations to develop contingency plans, diversify suppliers, and build flexibility into their operations, ensuring uninterrupted business continuity.

#### **8. Contributing to Sustainability and Social Responsibility:**

Modern SCM emphasizes eco-friendly sourcing, waste reduction, and ethical labor practices. By integrating sustainability into their supply chain, organizations not only protect the environment but also strengthen their corporate social responsibility (CSR) initiatives.

In conclusion, the importance of supply chain management extends far beyond logistics and inventory control. It acts as a strategic framework that enhances productivity, profitability, and customer satisfaction - all of which are essential for long-term organizational success in a globalized economy.

### **1.1.5 Advantages of Supply Chain Management**

Effective Supply Chain Management (SCM) offers numerous advantages that contribute to the overall success, profitability, and sustainability of an organization. By integrating suppliers, manufacturers, distributors, and customers into a unified network, SCM enables companies to achieve operational excellence and long-term competitive advantage.

The major advantages of supply chain management are discussed below:

#### **1. Cost Reduction:**

One of the most significant benefits of SCM is the reduction of operating costs. Efficient coordination among procurement, production, and logistics helps minimize wastage, lower transportation costs, and reduce excess inventory. This cost efficiency directly enhances profitability and improves overall financial performance.

#### **2. Improved Efficiency and Productivity:**

SCM streamlines all operational processes - from sourcing raw materials to delivering finished goods. Through automation, forecasting, and real-time data sharing, organizations can eliminate delays and redundancies. As a result, productivity increases and resources are utilized more effectively.

#### **3. Better Customer Satisfaction:**

A well-managed supply chain ensures that products reach customers on time and in perfect condition. This reliability builds trust and satisfaction, which leads to repeat purchases and positive brand reputation. Consistent product availability also helps companies retain loyal customers in competitive markets.

#### **4. Enhanced Collaboration and Communication:**

SCM promotes collaboration between various stakeholders - including suppliers, manufacturers, and distributors. By enabling real-time communication and information sharing, it helps resolve issues quickly and improves coordination across departments and partner organizations.

#### **5. Stronger Supplier Relationships:**

Effective supply chain practices foster mutual trust and transparency with suppliers. Long-term relationships with reliable suppliers lead to better quality materials, timely delivery, and

reduced procurement risks. Collaborative partnerships also enable innovation and joint problem-solving.

#### **6. Better Inventory Control:**

Through advanced planning and monitoring, SCM ensures that inventory levels are maintained at an optimal balance. This prevents overstocking or stockouts, thereby saving storage costs and improving cash flow management. Techniques such as Just-in-Time (JIT) and Material Requirements Planning (MRP) are often applied to maintain efficiency.

#### **7. Increased Agility and Flexibility:**

Modern SCM systems make organizations more agile in responding to market fluctuations, customer demands, or unexpected disruptions. The ability to quickly adjust production schedules, sourcing strategies, and logistics networks provides a competitive edge in dynamic business environments.

#### **8. Competitive Advantage and Market Expansion:**

Companies with efficient supply chains can deliver products faster, at lower costs, and with higher quality - giving them a strong advantage over competitors. This advantage supports market expansion, customer retention, and long-term business growth.

#### **9. Better Risk Management:**

SCM helps identify potential risks - such as supply disruptions, quality issues, or transportation delays - and implement proactive measures to mitigate them. This risk-awareness culture reduces uncertainty and ensures business continuity.

#### **10. Sustainability and Environmental Benefits:**

An optimized supply chain reduces waste, promotes energy efficiency, and supports eco-friendly sourcing practices. Sustainable SCM not only lowers environmental impact but also enhances corporate reputation and compliance with global environmental standards.

In summary, Supply Chain Management is not merely an operational tool but a strategic system that improves efficiency, profitability, and sustainability. By optimizing resources, fostering collaboration, and focusing on customer satisfaction, SCM plays a pivotal role in ensuring the long-term success of modern organizations.

## **1.2 Supply Chain Management in the Pharmaceutical Industry**

Supply Chain Management (SCM) plays a vital role in ensuring the safe, efficient, and reliable distribution of pharmaceuticals and healthcare products. It involves multiple interconnected functions such as raw material sourcing, product manufacturing, logistics, inventory management, and distribution, all of which must operate seamlessly to maintain product quality, safety, and compliance.

The pharmaceutical supply chain is complex, highly regulated, and global in nature. It requires careful coordination across various stakeholders, including manufacturers, distributors, regulatory bodies, and healthcare providers. The key components and considerations of pharmaceutical supply chain management are discussed below:

### **1. Raw Material Sourcing:**

Pharmaceutical companies depend on high-quality raw materials, including Active Pharmaceutical Ingredients (APIs) and excipients, which must be sourced from reputable and certified vendors. Ensuring the quality, safety, and regulatory compliance of these materials is crucial to prevent contamination and maintain product integrity. [9][10]

### **2. Production and Manufacturing:**

The production phase involves converting raw ingredients into finished dosage forms such as tablets, syrups, or injections. This process requires strict adherence to Good Manufacturing Practices (GMP), optimized production workflows, and rigorous quality control measures. Efficient production management ensures that medicines are manufactured safely, consistently, and cost-effectively. [11]

### **3. Quality Assurance and Control:**

Quality control is a cornerstone of pharmaceutical SCM. It includes laboratory testing, batch sampling, and stability studies to ensure product safety, purity, and efficacy. These quality assurance practices verify that all products meet regulatory and pharmacological standards before being released to the market.

### **4. Regulatory Compliance:**

Pharmaceutical supply chains must comply with numerous national and international regulations, including Good Manufacturing Practice (GMP), Good Distribution Practice (GDP), and standards set by agencies such as the U.S. Food and Drug Administration (FDA)

and the European Medicines Agency (EMA). Compliance ensures patient safety and product credibility in the global market.

### **5. Packaging and Labeling:**

Proper packaging and labeling are essential for product identification, traceability, and regulatory adherence. Labels must include information such as batch numbers, expiration dates, barcodes, and patient-specific data. Supply chain managers are responsible for ensuring accuracy and consistency in labeling to prevent errors and enhance traceability.

### **6. Cold Chain Management:**

Many pharmaceutical products - including vaccines, biologics, and temperature-sensitive drugs - require controlled temperature conditions during storage and transportation. Maintaining the integrity of the cold chain is critical to prevent product degradation and ensure patient safety. Advanced temperature monitoring systems and insulated logistics solutions are used to ensure compliance.

### **7. Logistics and Distribution:**

An efficient logistics and distribution network ensures that medicines reach hospitals, pharmacies, and patients on time.

Supply chain managers oversee order fulfillment, warehousing, and shipping, considering factors such as product stability, safety, and regulatory constraints. Effective distribution reduces lead times and ensures continuous product availability in the market.

### **8. Inventory Management:**

Effective inventory management prevents both stockouts and overstocking. By analyzing demand trends and monitoring stock levels, supply chain professionals can minimize waste, optimize working capital, and ensure uninterrupted availability of essential medicines.

### **9. Risk Management:**

Pharmaceutical supply chains face multiple risks such as supply disruptions, counterfeiting, theft, and non-compliance. To mitigate these risks, companies implement strategies like dual sourcing, supplier audits, serialization, and track-and-trace systems. These mechanisms improve visibility and protect the authenticity of products.

## **10. Collaboration and Information Sharing:**

Successful pharmaceutical SCM depends heavily on collaboration among manufacturers, distributors, healthcare institutions, and regulatory authorities. Sharing real-time and accurate information enhances transparency, coordination, and decision-making. Digital integration platforms have made multi-tier communication easier and more efficient.

## **11. Technological Advancements:**

Modern pharmaceutical supply chains are increasingly adopting cutting-edge technologies such as Blockchain, the Internet of Things (IoT), and Data Analytics. These innovations enhance transparency, enable traceability, and improve operational efficiency. For instance, blockchain helps verify product authenticity, IoT devices monitor temperature in transit, and analytics tools predict demand fluctuations.

In conclusion, pharmaceutical supply chain management is essential for ensuring that patients have timely access to safe, effective, and high-quality medicines. By integrating technology, regulatory compliance, and collaboration, the pharmaceutical industry can achieve transparency, reliability, and sustainability throughout the entire supply chain.

## **1.3 Objectives of Supply Chain Management**

The main objective of Supply Chain Management (SCM) is to ensure the smooth, efficient, and cost-effective flow of goods, services, and information from suppliers to end customers. SCM integrates all operational activities - such as sourcing, production, inventory, logistics, and distribution - to maximize customer satisfaction and business profitability.

The key objectives of SCM are outlined below:

### **1. Ensuring Customer Satisfaction:**

The foremost goal of SCM is to deliver the right product, in the right quantity, at the right time, and at the right place. Satisfying customer demand through reliability and consistency builds long-term relationships and strengthens brand loyalty.

### **2. Reducing Operational Costs:**

SCM aims to minimize total operational costs across the value chain - from raw material procurement to final distribution. By optimizing inventory, reducing waste, and improving logistics efficiency, organizations can achieve significant cost savings.

### **3. Improving Efficiency and Responsiveness:**

Through better coordination among departments and automation of processes, SCM increases operational efficiency. It also enhances responsiveness to market changes, seasonal demand fluctuations, and unexpected disruptions in the supply chain.

### **4. Better Distribution and Logistics Performance:**

An essential objective of SCM is to ensure better distribution of products. This involves optimizing transportation routes, managing delivery schedules, and maintaining the right balance between central and regional warehouses.

Efficient distribution not only reduces lead times but also ensures that products reach customers safely, on time, and in perfect condition.

### **5. Optimizing Inventory Management:**

Maintaining the right level of inventory is vital for operational balance. SCM ensures that stock levels align with demand forecasts, minimizing both overstocking and stockouts. Effective inventory management improves cash flow and resource utilization.

### **6. Enhancing Collaboration and Communication:**

SCM emphasizes strong coordination among suppliers, manufacturers, distributors, and customers. Sharing real-time data through digital platforms ensures transparency, faster decision-making, and overall supply chain visibility.

### **7. Ensuring Quality and Compliance:**

Another major objective is maintaining high quality and adhering to national and international standards. SCM enforces quality control measures and supplier audits to ensure compliance with regulatory frameworks - especially critical in the pharmaceutical industry.

### **8. Achieving Flexibility and Adaptability:**

SCM systems are designed to be flexible and adaptive. This allows organizations to modify production schedules, sourcing plans, or delivery processes quickly in response to market or environmental changes.

## **9. Promoting Sustainability and Ethical Practices:**

Sustainability is now a global priority. SCM integrates environmentally responsible practices such as reducing waste, minimizing emissions, and ensuring ethical sourcing. A sustainable supply chain supports both business reputation and long-term growth.

## **10. Supporting Strategic Decision-Making:**

By providing valuable insights through analytics and forecasting, SCM aids management in making strategic decisions related to demand planning, procurement, and capacity utilization. Data-driven decision-making strengthens competitive positioning.

## **11. Enhancing Profitability and Value Creation:**

Ultimately, SCM aims to increase profitability by improving value delivery and reducing inefficiencies. A well-integrated and transparent supply chain creates a strong competitive advantage and promotes sustainable business success.

In conclusion, Supply Chain Management is not limited to procurement or logistics alone - it represents a comprehensive approach to managing every element of product movement and information flow. Efficient distribution, customer orientation, and sustainability together form the backbone of a successful supply chain strategy.

## **1.4 Delta Pharma Ltd.**

Delta Pharma Limited is one of the leading pharmaceutical companies in Bangladesh, recognized for its commitment to producing high-quality, affordable, and innovative medicines. Established in 2004, the company has rapidly expanded its operations and earned a strong reputation in both local and international markets. DELTA Pharma is driven by a mission to ensure better healthcare through quality products and ethical business practices.

### **Company Overview**

Delta Pharma Ltd. was founded with the vision to provide world-class pharmaceutical solutions that meet the needs of patients and healthcare professionals.

The company manufactures a wide range of therapeutic drugs including antibiotics, cardiovascular, gastrointestinal, antidiabetic, analgesic, antihistamine, and vitamin products.

Its modern manufacturing facility is located in Kishorgonj, Bangladesh, which operates in full compliance with World Health Organization (WHO) Good Manufacturing Practice

(GMP) guidelines. The production plant is equipped with advanced technology and automated systems to maintain product quality, safety, and efficiency.

**Vision:**

To become a leading pharmaceutical company in Bangladesh by providing high-quality healthcare products that improve the lives of people and promote a healthier nation.

**Mission:**

To manufacture and supply effective, affordable, and innovative pharmaceutical products while ensuring ethical standards, professional excellence, and customer satisfaction.

**Core Values:**

Delta Pharma's activities are guided by a set of core values that define its corporate culture and operational philosophy:

- Integrity: Maintaining transparency and honesty in all business operations.
- Quality: Ensuring that every product meets international standards of safety and efficacy.
- Innovation: Continuously developing new formulations and improving existing ones.
- Customer Focus: Understanding and fulfilling customer needs efficiently.
- Teamwork: Encouraging collaboration and mutual respect across departments.
- Social Responsibility: Contributing to the community through ethical and sustainable business practices.

**Manufacturing and Quality Standards:**

The company's manufacturing operations strictly follow GMP (Good Manufacturing Practice) and GLP (Good Laboratory Practice) standards. Each product goes through a comprehensive process of formulation, validation, and quality assurance before being released into the market.

Delta Pharma also employs advanced Quality Control (QC) and Quality Assurance (QA) mechanisms to ensure product reliability and compliance with national and international regulations.

### **Research and Development (R&D):**

The R & D division of Delta Pharma continuously works on developing new drug formulations and improving existing products to address emerging healthcare challenges. The department collaborates with universities, research institutions, and healthcare professionals to ensure continuous innovation and technological advancement.

### **Marketing and Distribution Network:**

Delta Pharma Ltd. has a strong nationwide marketing and distribution network that covers all major regions of Bangladesh. The company operates through multiple depots and distribution centers, ensuring timely delivery of medicines to pharmacies, hospitals, and healthcare providers. Its experienced sales and distribution teams use digital tracking and logistics systems to maintain supply chain transparency and efficiency.

In addition to its domestic success, Delta Pharma has started expanding into international markets, exporting products to several Asian and African countries. The company's distribution model focuses on reliability, cold chain integrity (where applicable), and regulatory compliance to ensure product quality during transit.

### **Human Resources and Corporate Culture:**

The company believes that its employees are its most valuable asset. Delta Pharma maintains a positive working environment that encourages skill development, innovation, and professional growth. Regular training programs and workshops are organized to enhance employee performance and align them with the company's mission and vision.

### **Corporate Social Responsibility (CSR):**

As part of its CSR commitment, DELTA Pharma actively participates in community health programs, medical camps, and awareness initiatives. The company also supports educational and social welfare projects, reflecting its dedication to national development and humanitarian service.

**Conclusion:** Delta Pharma Ltd. stands as a symbol of excellence, integrity, and commitment in the Bangladeshi pharmaceutical industry. Its strong focus on quality, innovation, and ethical practices has positioned it as a trusted name among healthcare professionals and patients alike. Through continuous improvement, efficient supply chain management, and dedication to customer well-being, Delta Pharma aims to contribute significantly to the advancement of Bangladesh's healthcare sector.

## 1.5 Purpose of the Study

The purpose of this study is to explore and analyze the practices of Supply Chain Management (SCM) in the pharmaceutical industry of Bangladesh, with a particular focus on Delta Pharma Ltd.

As one of the most dynamic and sensitive sectors, the pharmaceutical industry requires a highly efficient and transparent supply chain to ensure the timely availability of quality medicines. This research aims to understand how Delta Pharma Ltd. manages its supply chain operations - including procurement, production, inventory, distribution, and logistics - to maintain product quality, reduce operational costs, and enhance customer satisfaction.

The study further seeks to identify challenges in the existing system and propose potential solutions for improving performance and competitiveness.

In particular, the study has been undertaken with the following purposes:

- 1. To Evaluate the Efficiency of Supply Chain Operations:** To assess how effectively DELTA Pharma Ltd. coordinates its procurement, production, and distribution processes in order to maintain a seamless flow of materials and products across the supply chain.
- 2. To Examine the Role of Supply Chain Management in Ensuring Product Quality:** To investigate how SCM practices contribute to maintaining quality standards, compliance with regulations, and overall reliability in the pharmaceutical production and distribution network.
- 3. To Identify the Key Challenges and Constraints:** To explore the common challenges faced by pharmaceutical companies in Bangladesh, such as inventory imbalance, logistics limitations, supplier delays, and regulatory compliance issues.
- 4. To Analyze the Effectiveness of Distribution and Logistics Management:** To examine how DELTA Pharma Ltd. ensures efficient and timely delivery of medicines through its nationwide distribution network, minimizing delivery delays and optimizing transportation routes.
- 5. To Suggest Possible Improvements in the Supply Chain Process:** To provide practical recommendations for improving efficiency, transparency, and cost-effectiveness in the company's supply chain operations through modern technologies and strategic planning.
- 6. To Understand the Impact of SCM on Organizational Performance:** To determine how an effective supply chain contributes to Delta Pharma's operational success, profitability, and sustainable growth in a competitive market.

## 1.6 Objectives of the Study:

The main objective of this study is to analyze the overall Supply Chain Management (SCM) practices of Delta Pharma Ltd., one of the prominent pharmaceutical companies in Bangladesh, and to understand how efficient supply chain operations contribute to the company's success and sustainability.

This research seeks to identify the key components, challenges, and outcomes of the supply chain process, focusing on procurement, production, distribution, and logistics management. The study also aims to suggest strategies for enhancing the company's operational performance through improved supply chain practices.

To fulfill this goal, the study has been designed with the following specific objectives:

- 1. To understand the supply chain structure of Delta Pharma Ltd:** To explore the organizational framework and inter-departmental coordination involved in managing the supply chain processes, from raw material procurement to finished product delivery.
- 2. To evaluate the efficiency of supply chain operations:** To assess how effectively Delta Pharma Ltd. utilizes its resources, technology, and workforce to ensure smooth and cost-effective supply chain performance.
- 3. To identify the challenges in the supply chain management process:** To analyze the internal and external challenges such as supplier dependency, distribution delays, regulatory compliance issues, and transportation constraints affecting SCM in Delta Pharma Ltd.
- 4. To examine the effectiveness of the distribution network:** To study how the company's distribution system ensures timely delivery of medicines to depots, pharmacies, and healthcare institutions, and to assess the use of logistics systems for maintaining product integrity and safety.
- 5. To measure the impact of SCM on organizational performance:** To evaluate how effective supply chain management enhances operational efficiency, reduces costs, and contributes to profitability, customer satisfaction, and sustainable growth.
- 6. To recommend strategies for improvement:** To propose practical recommendations for overcoming existing challenges and strengthening Delta Pharma Ltd.'s supply chain through technological advancement, digital integration, and strategic collaboration.

In conclusion, the study's objectives are designed to provide a comprehensive understanding of supply chain management in the pharmaceutical industry, focusing particularly on Delta

Pharma Ltd. By achieving these objectives, this research aims to bridge the gap between theoretical supply chain models and their practical application in a real-world corporate environment.

## **1.7 Significance of the Study**

The study on Supply Chain Management (SCM) practices in the pharmaceutical industry of Bangladesh, with a special focus on Delta Pharma Ltd., carries significant academic, practical, and industrial value. In a highly regulated and competitive market like pharmaceuticals, effective supply chain management ensures not only business efficiency but also public health and patient safety. This research is important because it provides a detailed understanding of how an efficient supply chain contributes to the overall success of a pharmaceutical company - from raw material procurement to the delivery of finished medicines. The significance of this study can be explained from multiple perspectives as follows:

### **1. Academic Significance:**

This research contributes to the growing body of knowledge on supply chain management, particularly within the context of the pharmaceutical industry in developing countries like Bangladesh. It bridges the gap between theoretical models of SCM and their real-world applications. The study will also serve as a valuable academic reference for students, researchers, and future professionals in the fields of business administration, logistics, and healthcare management.

### **2. Practical Significance for Delta Pharma Ltd:**

The study will help Delta Pharma Ltd. evaluate its current supply chain practices, identify areas of improvement, and implement strategies to enhance efficiency and reduce costs. By analyzing real operational challenges such as procurement delays, distribution inefficiencies, and inventory control issues, the research provides practical insights that can support management in making data-driven decisions.

### **3. Industrial and Policy Significance:**

From an industry-wide perspective, the study offers a better understanding of how pharmaceutical companies in Bangladesh can improve their supply chain resilience, maintain product quality, and comply with global standards like GMP (Good Manufacturing Practice) and GDP (Good Distribution Practice). The findings may also assist policymakers and regulatory authorities in formulating guidelines to strengthen supply chain transparency, traceability, and accountability in the pharmaceutical sector.

#### **4. Social and Healthcare Significance:**

Efficient supply chain management in pharmaceuticals directly impacts public health by ensuring that patients have access to safe, effective, and affordable medicines. By highlighting the role of SCM in maintaining product availability and preventing shortages, this study underscores its importance in improving healthcare delivery and supporting national health objectives.

#### **5. Personal and Professional Significance:**

For the researcher, this study provides an opportunity to apply theoretical knowledge of supply chain management to real-world practice, especially in the pharmaceutical distribution context. It also enhances analytical, research, and managerial skills that will be valuable in future professional development.

In summary, this study is significant because it connects academic theory with industrial application, offering insights that benefit not only Delta Pharma Ltd., but also the wider pharmaceutical industry, academic community, and healthcare system of Bangladesh. By understanding and improving supply chain processes, organizations can contribute to both business excellence and societal well-being.

# Chapter-2: Literature Review

## The Concept of Supply Chain Management

In the modern business landscape, Supply Chain Management (SCM) has emerged as a critical strategic tool for gaining a competitive advantage. Organizations today prioritize the integration of internal operations with upstream supplier performance and downstream customer requirements to enhance operational efficiency, flexibility, and responsiveness (Tan et al., 1999). This shift toward SCM is driven by intensifying global competition and the need for sustainable performance. Historically, the concept is rooted in Michael Porter's (1985) "Value Chain," which suggests that competitive advantage stems from coordinated, value-adding activities across an organization's network.

The definition of SCM has evolved through various scholarly perspectives. Ganeshan and Harrison (1995) describe it as a network of facilities that manage material procurement, transformation, and distribution. Similarly, Lee and Corey (1995) emphasize SCM as a set of integrated processes that convert raw materials into final products delivered through a distribution system. Christopher et al. (1998) further expand this by defining the supply chain as a network of multiple organizations-including manufacturers, transporters, and retailers-linked together to deliver value to the ultimate consumer.

Ultimately, SCM has transitioned from a purely functional role to a strategic discipline that requires constant innovation and performance monitoring. Recent research focuses heavily on performance measurement systems, which allow organizations to evaluate the efficiency and effectiveness of their interconnected networks. In summary, effective SCM is characterized by continuous assessment, stakeholder collaboration, and the reduction of operational inefficiencies, all of which are essential for maintaining a strong competitive position in a globalized marketplace.

**Summary of Literature Review:** The reviewed literature establishes Supply Chain Management (SCM) as a strategic necessity for achieving competitive advantage through operational efficiency and stakeholder integration. Rooted in Porter's (1985) Value Chain and expanded by various scholars, SCM is viewed as a collaborative network that transforms raw materials into consumer value. For an organization like Delta Pharma, these principles are vital for managing complex pharmaceutical distribution and ensuring responsiveness in a competitive market. The literature emphasizes that performance measurement and continuous innovation are essential for optimizing such networks. Ultimately, the integration of these SCM practices-as applicable to Delta Pharma-is fundamental to reducing operational inefficiencies and maintaining a sustainable position in the global marketplace.

## Chapter-3: Methodology

This chapter describes the research methodology adopted to conduct the study on Supply Chain Management practices in the Pharmaceutical Industry of Bangladesh, with a special focus on Delta Pharma Ltd. It outlines the research design, data collection methods, sources of information, sampling procedure, and analytical techniques used to achieve the objectives of the study.

### 3.1 Research Design

The study follows a descriptive research design, which aims to provide an accurate and systematic description of the current supply chain management practices at Delta Pharma Ltd. Descriptive research is appropriate for this study because it allows for a detailed understanding of existing SCM operations, their efficiency, and the challenges faced by the organization.

This research combines both qualitative and quantitative approaches. The qualitative part focuses on understanding operational processes, managerial perceptions, and organizational policies, while the quantitative part deals with measurable data such as delivery time, inventory turnover, and order fulfillment rates. Together, these methods ensure a comprehensive and balanced analysis.

### 3.2 Sources of Data:

To achieve the research objectives, the study utilized both primary and secondary sources of data.

#### a) Primary Data:

Primary data were collected directly from Delta Pharma Ltd. through interviews, surveys, and direct observation. The respondents included managers, executives, and operational staff working in the departments of Procurement, Production, Distribution, and Supply Chain Management. A structured questionnaire was designed to gather relevant information on topics such as supplier management, inventory control, distribution efficiency, and logistics coordination. In addition, informal discussions were conducted to gain deeper insights into organizational practices and challenges.

#### b) Secondary Data:

Secondary data were collected from various published and unpublished sources, including:

- Company reports and internal documents of Delta Pharma Ltd.
- Annual reports and official publications from the Bangladesh Association of Pharmaceutical Industries (BAPI)
- Academic journals, research articles, and books on supply chain management
- Government publications and regulatory guidelines (DGDA, WHO, and GMP standards)
- Reputable online resources and databases

Secondary data were used primarily to support and validate the findings obtained from primary sources.

### **3.3 Data Collection Method**

The data collection process involved both survey-based methods and interviews with key personnel of Delta Pharma Ltd. The researcher used a semi-structured questionnaire consisting of both open-ended and close-ended questions.

- **Open-ended questions** allowed respondents to express their opinions freely about SCM challenges and improvement opportunities.
- **Close-ended questions** were used to obtain measurable and comparable data.

Additionally, the researcher personally visited the Distribution and Supply Chain Departments of Delta Pharma Ltd. to observe the actual workflow, storage procedures, and transportation practices. This helped to verify the consistency between reported and observed practices.

### **3.4 Population and Sampling:**

The study population consisted of employees from Delta Pharma Ltd., particularly those involved in supply chain-related activities. These included personnel from the Procurement, Production, Quality Control, and Distribution departments.

A purposive sampling technique was used to select respondents with relevant knowledge and experience in SCM operations. The total sample size consisted of 30 respondents, including:

- 5 from Procurement
- 8 from Production and Planning
- 10 from Distribution and Depot Operations
- 7 from Supply Chain and Logistics

This sample size was considered adequate to represent the operational diversity within the company while maintaining focus on the research objectives.

### **3.5 Data Analysis Techniques:**

After data collection, both qualitative and quantitative analysis techniques were used to interpret the findings.

- **Quantitative data** were analyzed using basic statistical tools such as frequency tables, percentages, and graphical representations (bar charts, pie charts, and trend lines).
- **Qualitative data** were analyzed through content analysis to identify recurring themes, patterns, and insights related to supply chain challenges and opportunities.

Data were compared against theoretical frameworks and previous studies to validate the findings and derive meaningful conclusions.

### **3.6 Research Limitations:**

Despite careful planning, the study faced a few limitations:

1. **Limited access to confidential data:** Certain operational and financial information of Delta Pharma Ltd. was not disclosed due to company policy.
2. **Time constraints:** The research was conducted within a limited time frame, restricting the opportunity for wider data collection.
3. **Sample size:** The number of respondents was limited to one organization, which may reduce the generalizability of the findings to the entire pharmaceutical industry.

### **3.7 Ethical Considerations:**

All ethical principles were maintained throughout the study. The researcher obtained prior permission from Delta Pharma Ltd. before collecting data. Participants were informed about the purpose of the research, and their responses were treated with strict confidentiality.

The information collected was used solely for academic purposes, and no personal or organizational data were disclosed without consent.

### **3.8 Summary:**

This chapter provided an overview of the research methodology used in the study. The combination of qualitative and quantitative approaches ensured both depth and accuracy in the analysis. The data collected from Delta Pharma Ltd. through surveys, interviews, and observations form the foundation for the subsequent chapter, which focuses on data analysis and findings related to the supply chain management practices of the company.

# Chapter-4

## Company Profile and Supply Chain Practices of Delta Pharma Ltd.

This chapter focuses on the organizational profile of Delta Pharma Ltd. and examines its existing supply chain management (SCM) practices. It highlights how the company manages the flow of materials, production processes, distribution networks, and logistics operations to ensure efficient product delivery and customer satisfaction.

### 4.1 Profile of Delta Pharma Ltd:

Delta Pharma Limited is one of the reputed and fast-growing pharmaceutical companies in Bangladesh, dedicated to manufacturing and marketing high-quality, affordable, and innovative healthcare products. The company was established in 2004 and has since become a trusted name in the country's pharmaceutical sector for its commitment to excellence, ethics, and patient care.

The company's modern and well-equipped manufacturing plant is located in Kishorgonj, Bangladesh, and operates in full compliance with the World Health Organization (WHO) and Good Manufacturing Practice (GMP) guidelines. Delta Pharma's facilities are equipped with advanced production and quality control technologies, ensuring consistent product quality and safety.

The company manufactures a wide range of medicines across multiple therapeutic categories such as:

- Antibiotics
- Anti-ulcerants
- Cardiovascular drugs
- Anti-diabetic medications
- Analgesics and anti-inflammatory drugs
- Antihistamines
- Vitamins and nutritional supplements

Through continuous innovation, Delta Pharma strives to develop new and improved formulations to meet the evolving healthcare needs of patients and medical professionals.

### Vision

To become a leading and trusted pharmaceutical company in Bangladesh by providing high-quality, safe, and affordable healthcare products that contribute to the well-being of society.

## **Mission**

To continuously develop, manufacture, and deliver world-class pharmaceutical products through innovation, technology, and ethical practices - ensuring accessibility, effectiveness, and satisfaction for patients and healthcare providers.

## **Core Values**

Delta Pharma's operations are guided by a set of core values that shape its culture and business philosophy:

- **Quality:** Committed to uncompromised product quality and patient safety.
- **Integrity:** Ensuring honesty, transparency, and ethical conduct in all business dealings.
- **Innovation:** Encouraging continuous improvement through research and development.
- **Customer Focus:** Striving to meet and exceed customer expectations.
- **Teamwork:** Promoting cooperation and mutual respect among employees and departments.
- **Social Responsibility:** Contributing to the improvement of public health and community welfare.

## **Products and Services:**

Delta Pharma offers a diverse portfolio of pharmaceutical products designed to meet the healthcare needs of various therapeutic segments. The company focuses on:

- Manufacturing high-quality generic medicines.
- Providing cost-effective healthcare solutions.
- Maintaining continuous product availability through efficient distribution systems.
- Offering value-added services to doctors, pharmacists, and patients through awareness programs and medical information.

## **Manufacturing and Quality Standards:**

The company's production facility is equipped with advanced automated systems and supervised by skilled professionals. Each stage of manufacturing - from raw material procurement to final packaging - follows strict quality assurance and quality control (QA/QC) protocols.

All processes comply with GMP, GLP (Good Laboratory Practice), and GDP (Good Distribution Practice) standards. Delta Pharma also conducts internal audits and third-party quality checks to ensure product consistency and regulatory compliance.

**Distribution Network:** Delta Pharma maintains a robust and nationwide distribution network that ensures timely delivery of medicines across all regions of Bangladesh. The company has multiple regional depots strategically located in major districts to facilitate smooth logistics and on-time delivery to pharmacies, hospitals, and healthcare institutions.

Using Enterprise Resource Planning (ERP) software, Delta Pharma manages real-time coordination between production, inventory, and delivery systems. The company's distribution model emphasizes accuracy, temperature control, and regulatory compliance to maintain the integrity of pharmaceutical products.

**Research and Development (R&D):** The R&D Department of Delta Pharma plays a pivotal role in product innovation, process improvement, and new formulation development. The department focuses on developing cost-effective yet advanced pharmaceutical solutions while maintaining therapeutic quality and global standards. R&D also ensures that the company stays aligned with emerging scientific trends and international healthcare demands.

**Human Resources and Corporate Culture:** Delta Pharma believes that its employees are its greatest strength. The company fosters a culture of professionalism, innovation, and continuous learning. Employees are provided with regular training, workshops, and professional development programs to enhance their technical and managerial skills. A healthy working environment, clear communication, and teamwork contribute to Delta Pharma's long-term success.

**Corporate Social Responsibility (CSR):** Delta Pharma actively engages in community welfare and public health initiatives. The company organizes free medical camps, health awareness programs, and medicine donations for underprivileged communities. Its CSR philosophy reflects a strong commitment to improving the quality of life and supporting sustainable development in Bangladesh.



Figure 1 Delta Pharma manufacturing plant

## **Conclusion**

In summary, Delta Pharma Ltd. represents a modern, responsible, and quality-driven pharmaceutical organization in Bangladesh. Through its commitment to quality manufacturing, technological innovation, efficient supply chain management, and ethical practices, the company continues to strengthen its presence in both domestic and international markets. Delta Pharma's vision, values, and operational excellence make it a strong contributor to the advancement of the country's healthcare sector.

### **4.2 Comparative Advantage of Delta Pharma Ltd.**

Delta Pharma Ltd. enjoys several comparative advantages that have allowed it to strengthen its position in the highly competitive pharmaceutical industry of Bangladesh. These advantages stem from the company's strategic focus on quality, efficiency, innovation, and nationwide distribution capabilities. By combining technological advancement with operational excellence, Delta Pharma has successfully differentiated itself from many other local competitors.

The comparative advantages of Delta Pharma Ltd. can be categorized under the following key areas:

#### **1. Quality Manufacturing and Compliance:**

Delta Pharma's production facility operates in full compliance with World Health Organization (WHO) and Good Manufacturing Practice (GMP) standards. The company strictly follows quality assurance and quality control protocols to ensure that every product meets both local and international quality benchmarks. This strong commitment to product safety, consistency, and reliability gives Delta Pharma a significant edge over smaller manufacturers who lack comparable infrastructure or certification.

**2. Strong Brand Image and Market Reputation:** Over the years, Delta Pharma has built a solid reputation for trust and reliability among healthcare professionals, pharmacists, and patients. The company's focus on ethical business practices and the continuous delivery of high-quality medicines has enhanced its brand image and established long-term relationships with stakeholders. Its strong market credibility serves as a major competitive advantage, especially in retaining customer loyalty and expanding market share.

#### **3. Efficient Supply Chain and Distribution Network:**

One of Delta Pharma's greatest strengths lies in its integrated supply chain and distribution system. The company maintains regional depots in key locations across Bangladesh,

ensuring timely and uninterrupted product delivery. A combination of centralized planning, ERP-based logistics management, and real-time tracking enables Delta Pharma to achieve high efficiency and transparency in its distribution process.

The company's Depot and Distribution Department play a critical role in minimizing lead times, maintaining optimal inventory levels, and ensuring that products reach even the most remote areas.

This robust logistics network provides a competitive edge over other pharmaceutical companies with less developed distribution infrastructures.

#### **4. Technological Integration and Innovation:**

Delta Pharma continuously invests in technology to improve production, planning, and communication systems. The adoption of Enterprise Resource Planning (ERP) software allows seamless coordination between departments, improving accuracy in demand forecasting, procurement, and supply management.

Additionally, automation in production and packaging enhances operational efficiency and reduces the margin for human error.

The company is also exploring the use of data analytics, IoT (Internet of Things), and digital inventory tracking systems to enhance decision-making, optimize resource allocation, and strengthen supply chain visibility.

#### **5. Skilled Workforce and Professional Management:**

Delta Pharma's human resources are one of its greatest assets. The company employs experienced professionals in production, supply chain, marketing, and quality assurance. Continuous training programs are arranged to enhance employee skills and align them with modern technological and regulatory requirements. The presence of skilled and motivated employees ensures high productivity, operational discipline, and consistent product quality.

#### **6. Competitive Pricing Strategy:**

Another key advantage of Delta Pharma is its ability to maintain cost efficiency without compromising product quality. The company optimizes resource utilization and maintains long-term supplier relationships, allowing it to reduce production and procurement costs. This enables Delta Pharma to offer affordable medicines while maintaining profitability - a vital factor in a price-sensitive market like Bangladesh.

## 7. Export Potential and Global Expansion:

Delta Pharma has already begun exporting to several countries in Asia and Africa, which demonstrates its compliance with international quality standards. The company's export expansion strategy not only diversifies its revenue streams but also enhances its brand recognition in the global market.

This international orientation provides Delta Pharma with a sustainable growth path beyond the domestic market.

## 8. Research and Development (R&D) Capability:

The company's dedicated Research and Development (R & D) department constantly works on product innovation, new formulations, and process improvement. This continuous innovation allows Delta Pharma to remain competitive by addressing evolving healthcare needs and launching improved therapeutic products.

## 9. Strong Ethical and Social Commitment:

Delta Pharma's commitment to corporate social responsibility (CSR) further enhances its brand value. The company regularly participates in health awareness campaigns, supports healthcare programs, and promotes ethical medical practices. This responsible corporate image differentiates Delta Pharma from competitors focused solely on profit generation.



Figure 2 Comparative Advantage of Delta Pharma Ltd.

In conclusion, Delta Pharma Ltd. possesses strong comparative advantages arising from its quality manufacturing standards, efficient distribution network, technological integration, skilled workforce, and ethical practices. These factors collectively contribute to its success and resilience in a competitive industry.

By leveraging these strengths, Delta Pharma continues to maintain operational excellence, expand market share, and position itself as a leading player in Bangladesh's pharmaceutical sector.

### **4.3 Corporate Strategy of Delta Pharma Ltd.**

Delta Pharma Ltd. has developed a well-structured corporate strategy aimed at achieving sustainable growth, ensuring product quality, and maintaining competitiveness in Bangladesh's pharmaceutical industry. The company's strategy focuses on quality assurance, supply chain efficiency, market expansion, innovation, and ethical business practices.

**1. Quality and Compliance Strategy:** Delta Pharma prioritizes maintaining the highest product quality through strict adherence to WHO and GMP standards. Continuous monitoring, advanced machinery, and skilled professionals ensure that all products are safe, effective, and consistent.

**2. Market and Growth Strategy:** The company pursues both domestic and international expansion. In Bangladesh, Delta Pharma has built a strong nationwide marketing and distribution network, while globally, it is expanding exports to countries in Asia and Africa, enhancing its reputation as a trusted brand.

**3. Supply Chain and Operational Efficiency:** A key part of Delta Pharma's strategy is ensuring efficient supply chain management. Using ERP systems and centralized distribution, the company optimizes inventory, minimizes delays, and ensures timely product delivery across all regions.

**4. Research and Innovation:** Innovation is central to Delta Pharma’s growth. Its R & D department develops new formulations and improves existing ones to meet changing healthcare demands. The company also invests in modern technology to enhance production efficiency and competitiveness.

**5. Human Resource and Social Responsibility:** The company values its employees as key assets and provides regular training and development Programs To improve performance. Through Corporate Social Responsibility (CSR) activities such as health awareness campaigns and free medical camps, Delta Pharma contributes to community welfare and public health improvement.

**6. Sustainability and Cost Leadership:** Delta Pharma focuses on reducing costs through efficient operations, waste reduction, and smart resource utilization. It also promotes sustainability by using eco-friendly packaging and maintaining environmental compliance. In summary, Delta Pharma Ltd. follows a balanced and forward-looking corporate strategy emphasizing quality, innovation, efficiency, and ethics. Its continuous focus on technological advancement, customer satisfaction, and responsible business practices ensures sustainable growth and strengthens its position as a leading pharmaceutical company in Bangladesh.



Figure 3 Corporate Strategy of Delta Pharma Ltd

# Chapter-5

## Supply Chain Management of Delta Pharma Ltd.

This chapter focuses on the overall Supply Chain Management (SCM) system of Delta Pharma Ltd., explaining how the company manages its materials, production, distribution, and logistics operations. It also presents the workflow and coordination mechanisms among various departments that contribute to the company's efficiency and product quality. Delta Pharma Ltd. emphasizes quality, compliance, and effective communication among all departments and stakeholders involved in the supply chain.

### 5.1 Workflow of Supply Chain Management in Delta Pharma Ltd.

The workflow of Supply Chain Management at Delta Pharma Ltd. follows a systematic and integrated process that connects suppliers, manufacturers, distributors, and customers in a unified chain. Each stage of the workflow is carefully managed to ensure smooth operations and on-time product delivery. The workflow typically includes the following major steps:



Figure- 4 Workflow of Supply Chain Management in Delta Pharma Ltd.

## 5.2 Sourcing and Planning Department

One of the major departments of Delta Pharma Ltd. is the Sourcing and Planning Department, which plays a vital role in ensuring the smooth operation of the organization's supply chain. This department is primarily responsible for managing all types of purchases required by the company. It is considered one of the busiest and most dynamic departments within the organization.

The core activities of the Sourcing Department include the procurement of raw materials, packaging materials, capital goods (such as machinery, infrastructure, and production equipment), and various operational supplies necessary for day-to-day functions. The department ensures that all materials are purchased in compliance with the company's quality standards, regulatory guidelines, and cost-effectiveness objectives.

The Sourcing Department manages two main categories of procurement:

### 1. Standard Materials 2. Non-Standard Materials

Through effective planning, supplier evaluation, and negotiation, this department maintains a continuous supply of materials while controlling costs and minimizing risks associated with supply chain disruptions. It also works closely with the **Production Planning, Quality Control**, and **Finance** departments to ensure that purchasing activities align with the company's operational requirements and production schedules.



Figure 5 Sourcing and Planning Department

### **5.2.1 Standard Materials:**

In theoretical terms, standard materials refer to direct materials that are directly used in the production of finished goods. Every organization may have its own terminology to define the nature of materials used in its operations; however, in the context of Delta Pharma Ltd., standard materials indicate the raw materials and components directly involved in the manufacturing process.

These materials include active pharmaceutical ingredients (APIs), excipients, common and specialized parts, and sub-assemblies required for the formulation and production of finished products. The cost of standard materials can be directly attributed to a specific product, production batch, or cost unit.

The Planning Department provides material requirement forecasts to the Procurement Department, which then ensures timely sourcing and availability of the required inputs. This collaboration ensures a continuous and uninterrupted supply of high-quality raw materials essential for maintaining the company's production schedule and quality standards.

### **5.2.2 Non-Standard Materials:**

In Delta Pharma Ltd., all purchases other than raw materials and direct inputs are categorized as non-standard materials. These include all indirect items and services necessary for supporting day-to-day operations.

Departments across the organization are responsible for identifying their specific needs and submitting requisitions to the Procurement Department. Examples of non-standard materials include office supplies (e.g., paper, pins, stationery), printing materials, promotional items such as doctors' gifts, product literature, desktop computers, and maintenance tools for different departments.

The Sourcing Department manages these purchases through both local and international procurement channels.

- Local purchases are generally made from domestic suppliers who can deliver goods quickly and economically.
- International purchases are made for items not available locally or requiring specialized quality or compliance standards.

The department also explores and evaluates **new suppliers** to ensure better pricing, quality, and delivery performance. Although the fundamental procedures of local and international procurement are similar, the latter involves additional steps such as import documentation, customs clearance, and foreign currency transactions. A flowchart (Figure 6) may be used to illustrate the entire process of purchasing goods from local suppliers.

### **5.3 International Supply Chain:**

With increasing globalization and offshore sourcing, international supply chain management has become a crucial area of focus for many organizations, including Delta Pharma Ltd. Like conventional supply chain management, the main drivers of global sourcing are lower procurement costs, better quality control, and reduced supply risks.

Delta Pharma maintains strong relationships with reputable international suppliers to source high-quality raw materials, packaging components, and machinery from across the globe. This ensures the company's compliance with international production and safety standards.

The International Supply Chain Department works in close coordination with the Sourcing Department to handle the entire procurement process - from supplier selection and import documentation to shipment tracking and delivery to the manufacturing plant. Once the imported materials arrive, they are sent directly to the Quality Control (QC) section for inspection before being released for production.

In addition to importing materials, Delta Pharma is also expanding its export operations by producing and supplying pharmaceutical products to overseas markets, particularly in Asia and Africa.

The company often engages in contract manufacturing for export purposes, which requires specialized packaging, labeling, and shipping arrangements to meet foreign regulatory requirements.

Both the Sourcing Department and the International Supply Chain Team ensure that international procurement and export activities are managed efficiently, with strict adherence

to global quality and safety standards. This integrated approach allows Delta Pharma to maintain a strong presence in both domestic and international markets while ensuring operational excellence and product integrity.



Figure 6 International Supply Chain

#### **5.4 Working Flow Chart of Local Purchase and International Purchase:**

Purchasing and supply chain management play a crucial role in ensuring the efficient flow of materials, information, and services throughout the organization.

The process involves sourcing, procuring, producing, and delivering products and services to customers through a well-coordinated network of suppliers, manufacturers, logistics providers, and distributors.

In the context of Delta Pharma Ltd., purchasing is considered one of the most critical functions of the supply chain. It directly influences production continuity, cost efficiency, and product quality.

Effective purchasing ensures that all necessary raw materials, equipment, and services are available at the right time, in the right quantity, and at the right cost.

Supply chain management at Delta Pharma encompasses the management of sourcing, procurement, production, logistics, and customer relationships.

It also emphasizes strong coordination and collaboration among channel partners - including vendors, intermediaries, third-party service providers, and customers.

Each entity involved, from suppliers of raw materials to internal employees handling inventory, contributes to the overall success of the supply chain.

The following flow charts illustrate the working procedures of both local and international purchasing processes at Delta Pharma Ltd.

Figure 7: Comparative Flow Chart of Local and International Purchase Process (Delta Pharma Ltd.)

<b>Steps</b>	<b>Local Purchase</b>	<b>International Purchase</b>
1. Requirement Identification	Need identified by concerned department.	Requirement identified by sourcing or production.
2. Requisition Submission	Sent to Procurement Department.	Sent to International Sourcing Unit.
3. Approval	Approved by Department Head/Manager.	Approved by management considering import needs.
4. Supplier Selection	Local suppliers chosen from vendor list.	Foreign suppliers evaluated by quality and reputation.
5. Quotation & Evaluation	Local quotations analyzed for price and delivery.	Foreign quotations negotiated for cost and terms.
6. Purchase Order (PO)	PO issued to local supplier.	PO issued to foreign supplier.
7. Delivery / Shipment	Goods delivered to warehouse.	Goods shipped by sea/air with documents.
8. Quality Check	QC inspects received goods.	QC inspects imported materials.
9. Inventory & Documentation	GRN prepared and inventory updated.	Customs clearance done and inventory updated.
10. Payment	Paid locally through accounts.	Paid internationally via LC or TT.

## 5.5 Supplier Selection Criteria and Evaluation at Delta Pharma Ltd.



Figure 8 Sourcing Criteria of Delta Pharma Ltd.

### 5.5.1 Years in Business:

It is important to ensure that the supplier is well-established and experienced in meeting the company's requirements.

### 5.5.2 Ability to Consistently Supply Products or Services:

Suppliers must have a proven record of consistent supply without interruption, ensuring timely availability of products and services.

### **5.5.3 Ability to Supply All Required Products or Complete Solutions:**

Vendors should be capable of providing all necessary products or complete solutions to minimize dependence on multiple suppliers.

### **5.5.4 Flexibility in Modifying Orders or Product Lines:**

Suppliers must be flexible in accommodating order or product changes without imposing excessive penalties or delays.

### **5.5.5 Wide Catalogue of Products or Services:**

A broad range of products or services indicates a reliable and established supplier, offering greater convenience and long-term collaboration.

### **5.5.6 Availability of Technical Experts:**

Suppliers should have qualified professionals to provide technical support and guidance when required, especially for specialized products.

### **5.5.7 Testimonials and References:**

Positive testimonials and credible references confirm a supplier's reliability, integrity, and service quality.

### **5.5.8 Sustainability and Financial Stability:**

Suppliers must be financially stable and sustainable to ensure long-term business continuity and prevent supply disruptions.

### **5.5.9 Price:**

Price is one of the most crucial factors in supplier selection. While discounts and negotiations are flexible, overall cost competitiveness significantly influences the final decision.

### **5.5.10 Delivery Time:**

Timely delivery is essential to ensure smooth production flow. Suppliers must guarantee delivery at the specified time and location, with consistency in weekly or monthly schedules.

### **5.5.11 Terms of Business:**

Clear and fair business terms-particularly payment conditions-are vital, as they directly affect the company's cash flow and financial planning.

### **5.5.12 Customer Service:**

Efficient and responsive customer service is a key aspect of a long-term supplier relationship. Suppliers should have accessible, professional, and cooperative staff for order handling and support rather than relying solely on automated responses.

## **5.6 Supplier Evaluation Method and Practice in Delta Pharma Ltd.**

### **Supplier Performance Management:**

Suppliers play a vital role in ensuring the uninterrupted production of Delta Pharma Ltd. Since they provide the essential raw materials, their performance directly impacts product quality and service delivery.

Delta Pharma implements a Supplier Performance Management System (SPMS) to ensure that supplier activities meet contractual obligations and align with market standards. This process involves monitoring supplier performance, identifying performance gaps, and taking corrective actions to maintain expected quality and reliability levels.

### **Quality Commitment:**

Quality is the most critical criterion in evaluating supplier performance. Suppliers are selected carefully to ensure that all raw materials meet Delta Pharma's stringent quality standards.

The company never compromises on quality and continuously monitors supplier compliance to guarantee that only the finest materials are used in production.

### **Delivery Lead Time:**

Delivery lead time is a critical factor in supply chain management, especially for pharmaceutical companies. Timely availability of raw materials ensures uninterrupted production. Any delay in delivery can disrupt manufacturing, affect pharmacy inventories, and ultimately harm patients who rely on essential medicines.

Therefore, every supplier must strictly maintain delivery lead time to prevent negative chain effects in the market.



**5.7.2 Inventory:** The company emphasizes maintaining optimal inventory levels. By minimizing excess stock and strategically storing products in key locations, Delta Pharma reduces holding costs and ensures timely product availability.

**5.7.3 Location:**

Delta Pharma operates through strategically selected facilities that optimize logistics and cost efficiency. Centralized operations allow better coordination and reduced transportation and storage costs.

**5.7.4 Transportation:**

Efficient transportation ensures quick and reliable delivery of products nationwide. Delta Pharma uses modern logistics systems and route optimization to maintain timely distribution and meet customer demand effectively.

**5.7.5 Information:**

Information sharing is a key driver of supply chain success. Delta Pharma utilizes integrated ERP systems to ensure real-time data exchange between departments, enabling better planning, coordination, and decision-making.

# Chapter-6

## RESULTS AND DISCUSSIONS

### 6.1 Response Rate:

The response rate was **90%**, as 9 out of 10 department heads of Delta Pharma Ltd. participated in the study.

### 6.2 Supply chain management practice at DPL:

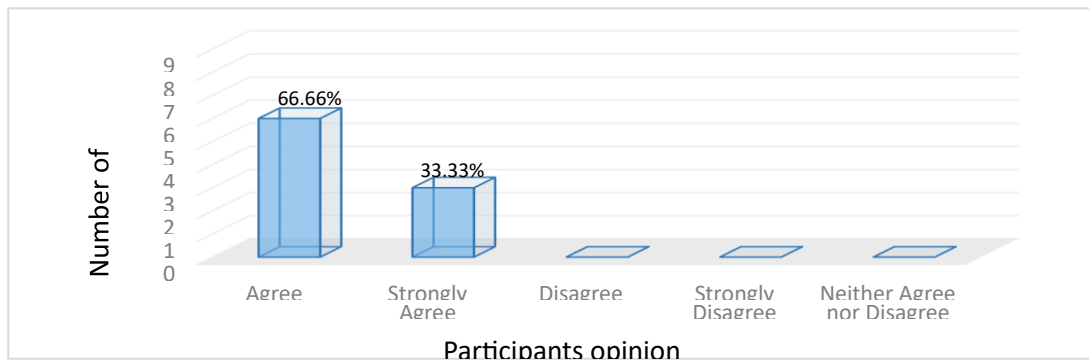


Figure 10 supply chain management practice in DPL.

According to the survey findings, 100% of respondents agreed that the DPL follows supply chain management procedures. This feedback is seen as evidence that DPL supply chain management practices have been successful.

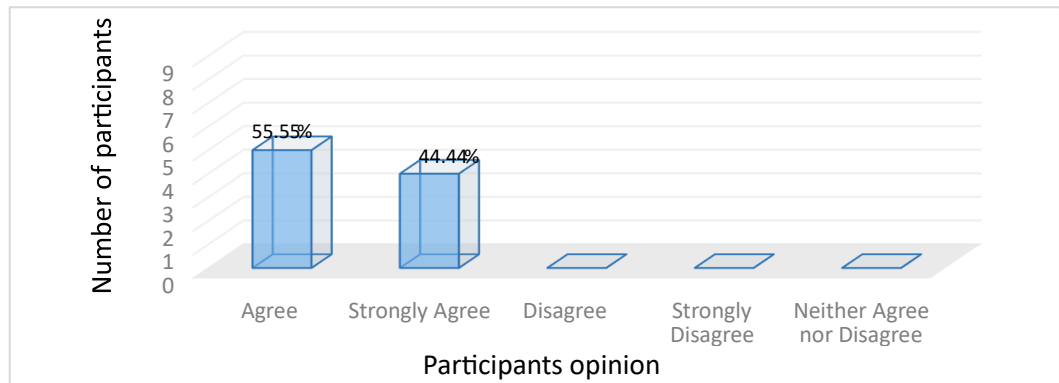


Figure 11 Implementation of SOPs for supply chain management department

The survey found that 55.55% agreed and 44.44% strongly agreed that Delta Pharma Ltd. has well-established Standard Operating Procedures (SOPs) for integrating supply chain management, ensuring smooth and consistent operations.

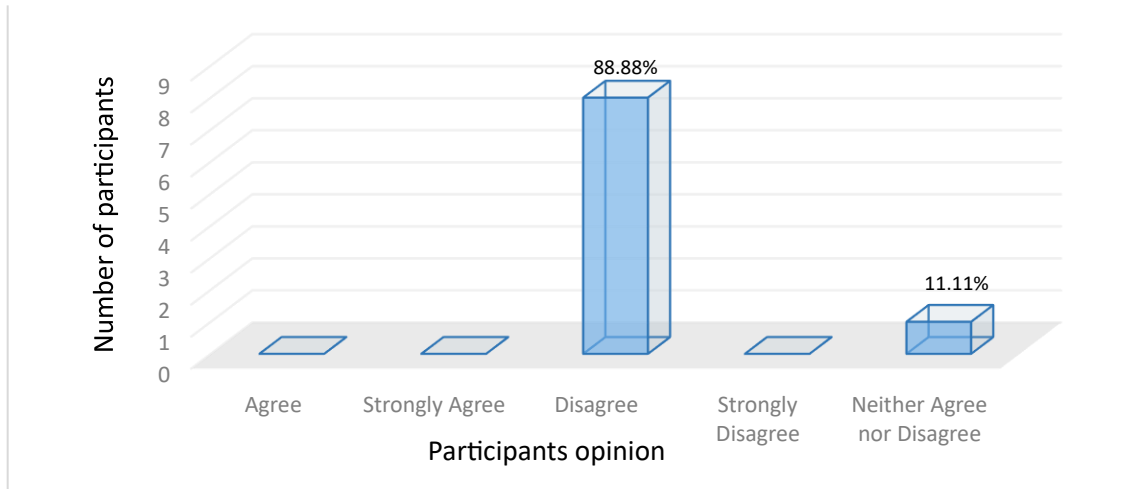


Figure 12 DPL using specialized software for the supply chain management department

The survey revealed that 88.88% disagreed and 11.11% were neutral about the use of specialized software in the supply chain department. This indicates a need for investment in suitable SCM software to enhance operational efficiency.

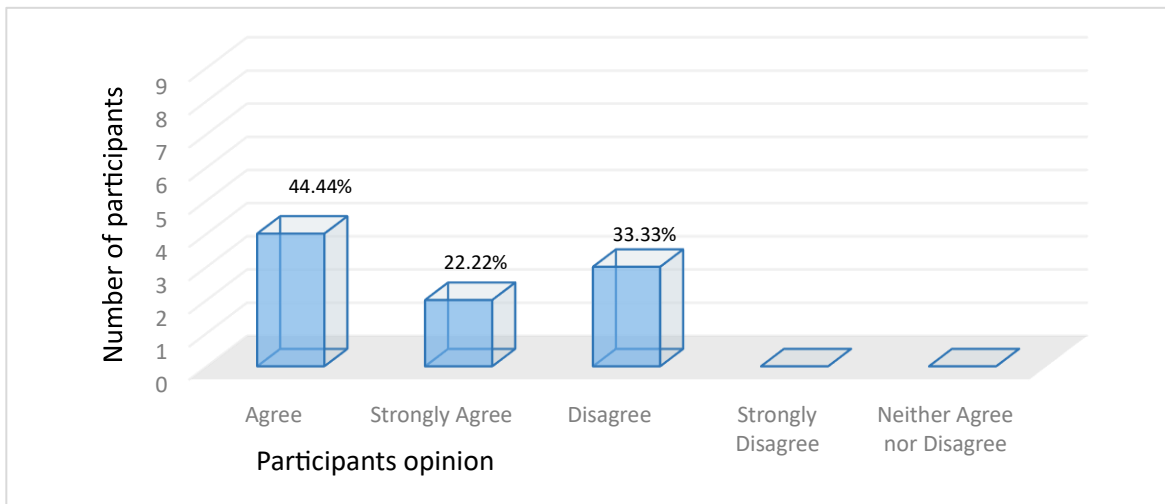


Figure 13 The supply chain management process is influenced in some way by stakeholders

The survey results show that 44.44% agreed, 22.22% strongly agreed, and 33.33% disagreed that stakeholders influence Delta Pharma Ltd.'s supply chain management process. These findings suggest a need for better communication and understanding of stakeholder involvement in supply chain operations.

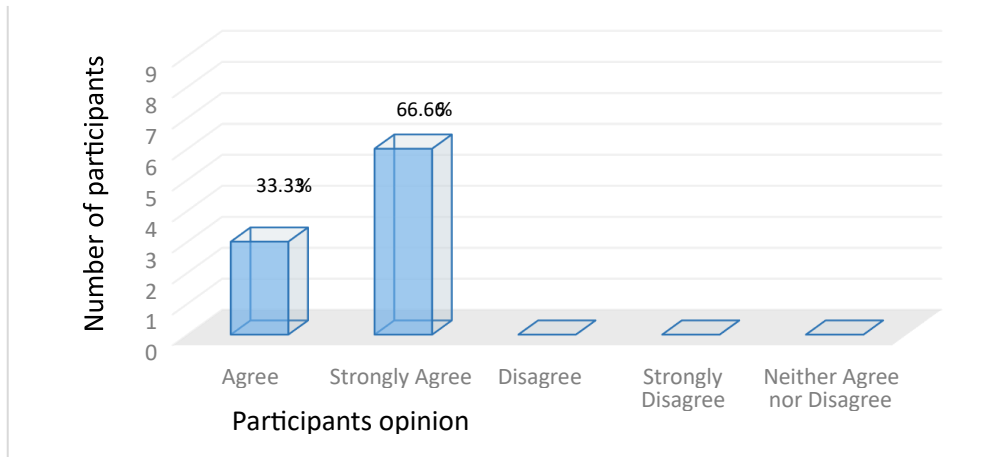


Figure 14 Centralized distribution ensure proper distribution system.

According to the survey, 33.33% agreed and 66.66% strongly agreed that a centralized distribution system ensures proper and efficient distribution. This strong support indicates that the system is well-established and effectively manages resource allocation within the company.

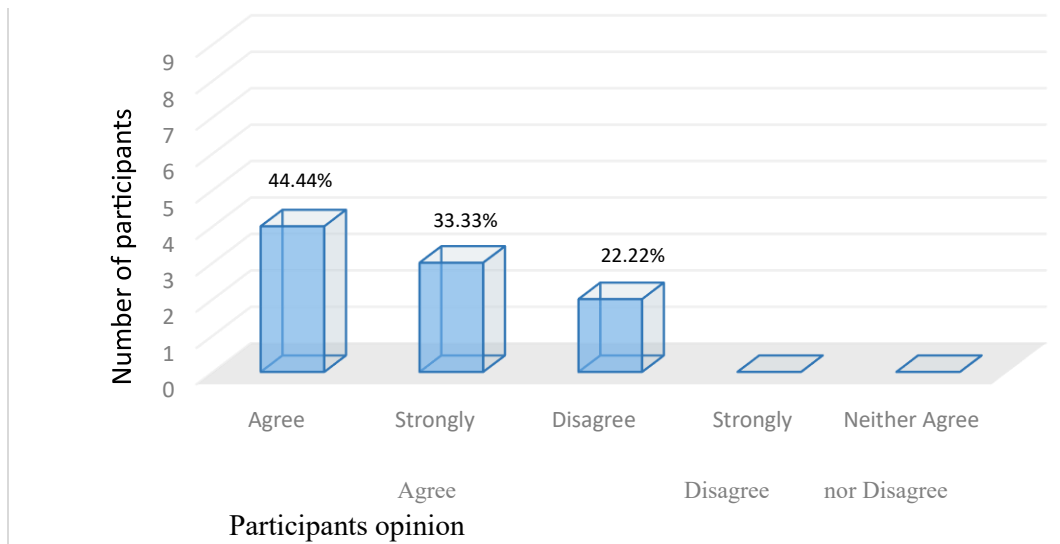


Figure 15 Application of KIPs for vendor's performance

The survey shows that 44.44% agreed, 33.33% strongly agreed, and 22.22% disagreed that implementing KPIs significantly influences vendor performance.

These mixed responses highlight the need for further evaluation of KPI use as a performance benchmark.

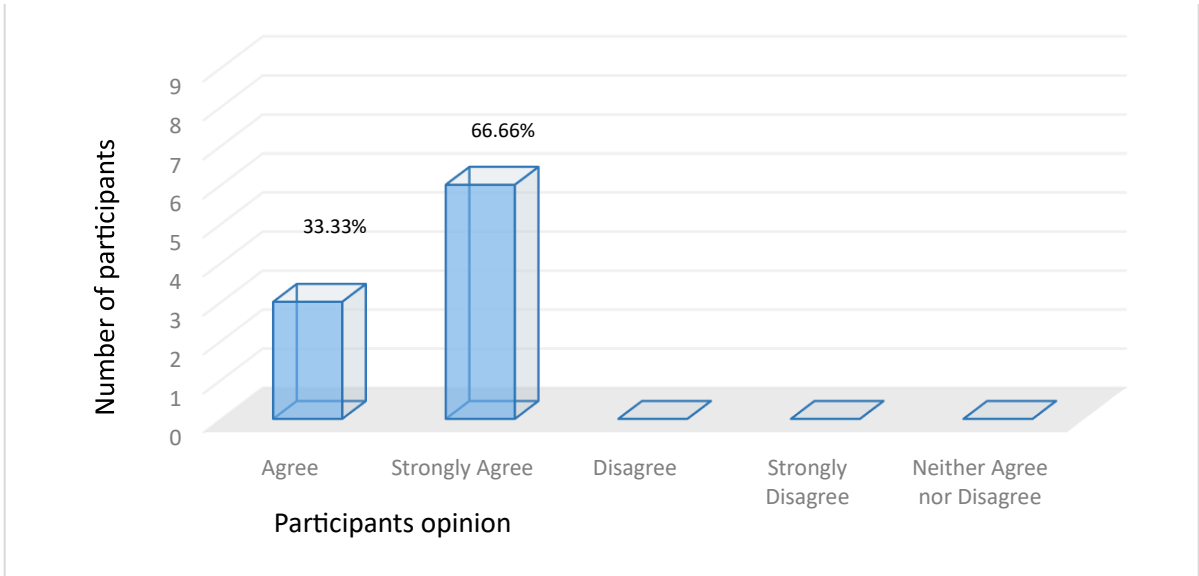


Figure 16 Influence of Supply chain management practices on performance of vendor

The survey found that 33.33% agreed and 66.66% strongly agreed that supply chain management practices significantly impact supplier performance. This strong consensus emphasizes the importance of effective supply chain management as a top priority to enhance supplier efficiency and overall organizational performance.

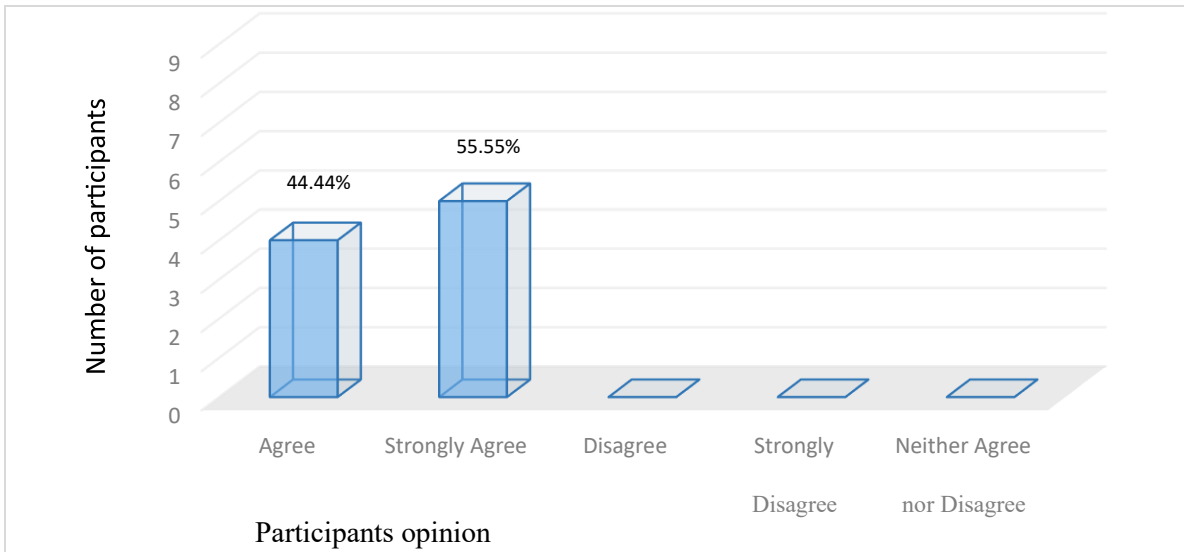


Figure 17 pre-enlistment vendor audits practiced to ensure quality sourcing.

According to the survey, 44.44% agreed and 55.55% strongly agreed that conducting pre-enlistment vendor inspections ensures sourcing quality. Such evaluations are essential for verifying supplier compliance with quality standards, leading to more reliable and efficient sourcing.

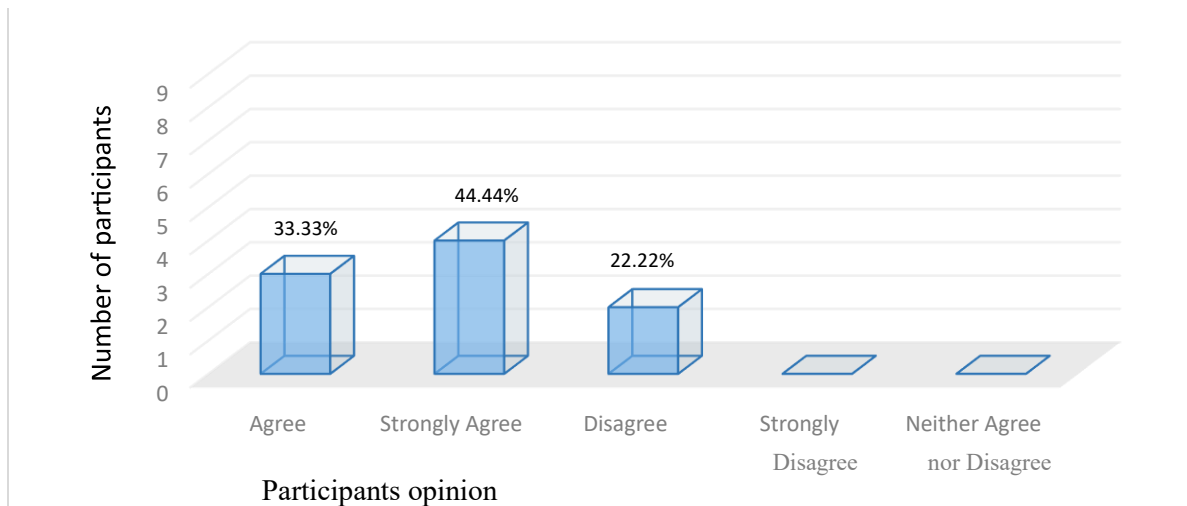


Figure 18 Seminars for quality assurance and problem solving with vendors.

According to the survey, 33.33% agreed, 44.44% strongly agreed, and 22.22% disagreed that organizing seminars can improve quality assurance and address vendor-related issues. These findings suggest that such initiatives could strengthen vendor management and quality control practices while addressing concerns of those less supportive.

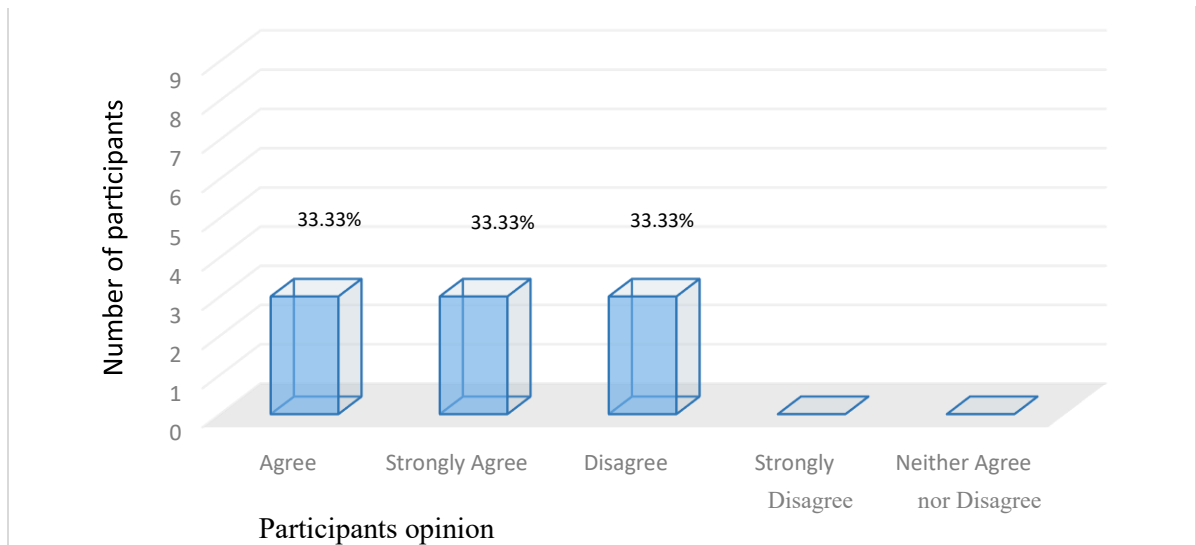


Figure 19 When a supply chain is integrated, performance may be better controlled and "emergencies" can be handled quickly.

According to the survey, 33.33% agreed, 33.33% strongly agreed, and 33.33% disagreed that integrating the supply chain improves performance control and emergency response. These mixed opinions highlight the need for further analysis and real-world examples to better understand the benefits and challenges of supply chain integration.

# Chapter-7

## RECOMMENDATIONS AND CONCLUSIONS

This chapter presents a summary of the main findings, conclusions, and recommendations of the study. The structure includes an overview of results aligned with the study's objectives, followed by key conclusions and policy recommendations for further improvement and research.

### 7.1 Summary of Findings

The study found that Delta Pharma Ltd. has adopted several effective supply chain management (SCM) practices, but some areas still require improvement. While the company demonstrates strong sourcing and quality assurance processes, challenges remain in the areas of digital transformation, information sharing, and supplier management efficiency.

- **ERP Implementation Need:** Delta Pharma has not yet implemented a dedicated Enterprise Resource Planning (ERP) system. Employees reported that the absence of ERP makes it difficult to demonstrate work progress and coordinate activities across departments. Competitors like Square Pharmaceuticals have achieved greater efficiency through ERP-supported supply chain integration. Therefore, delta Pharma should prioritize developing its own ERP system to streamline procurement, track receivables and payables, and enhance decision-making capabilities.
- **Market Expansion:** Although the company has gained international visibility, there is a need to strengthen its domestic market presence through improved logistics, local partnerships, and effective distribution strategies.
- **Employee Satisfaction:** Many senior employees expressed high job satisfaction regarding salary, facilities, and the working environment, reflecting a strong organizational culture and employee commitment.
- **Adoption of SCM Best Practices:** The pharmaceutical sector has implemented SCM best practices to varying degrees. However, some important areas remain underdeveloped - including green supply chain initiatives, supplier prequalification, lean operations, environmental standards, and supplier development programs.

## 7.2 Recommendations

Based on the study results and observations, the following recommendations are proposed to enhance Delta Pharma's supply chain performance:

1. **Develop and Implement an ERP System:** Establishing a customized ERP platform will integrate procurement, production, and distribution processes, ensuring better data management, faster decision-making, and higher efficiency.
2. **Adopt Supply Chain Software Solutions:** Utilize both planning and execution software for improved inventory management, demand forecasting, and operational efficiency. These tools can be hired from local IT vendors in Bangladesh to reduce setup costs.
3. **Enhance Supplier Relationship Management (SRM):** Introduce structured SRM practices to encourage price competitiveness, transparency, and long-term partnerships with vendors.
4. **Promote Green and Lean Supply Chain Practices:** Implement environmentally sustainable and cost-efficient processes such as recyclable packaging, energy-saving transportation, and waste reduction strategies.
5. **Strengthen Risk Management Framework:** Develop contingency plans for raw material shortages, logistics disruptions, and regulatory changes to ensure supply continuity.
6. **Increase Top Management Involvement:** Encourage greater leadership participation in SCM policy-making and monitoring to support long-term strategic goals.
7. **Supplier Audits and Training Programs:** Continue pre-enlistment inspections and organize periodic training seminars to align supplier performance with company standards.
8. **Encourage Continuous Research:** Future studies can explore the impact of digital transformation and artificial intelligence on pharmaceutical supply chains in Bangladesh to identify further opportunities for innovation.

## 7.3 Conclusions

From the findings, several key conclusions were drawn:

1. **Partial Implementation of SCM Practices:** Delta Pharma has made substantial progress in applying SCM best practices, but gaps remain in areas such as information technology integration, environmental compliance, and supplier collaboration.
2. **Positive Impact of SCM Drivers:** Factors such as logistics efficiency, supplier relationships, and IT systems have shown a strong positive correlation with overall firm performance within the pharmaceutical industry.
3. **Challenges in Implementation:** The company faces difficulties such as limited top management support, political interference, and low awareness among end-users and suppliers regarding procurement and sustainability practices.

## 7.4 Final Remark

In a relatively short time, Delta Pharma Ltd. has established itself as a respected name in Bangladesh's pharmaceutical industry. However, to compete more effectively with leading companies, it must focus on digital integration, process efficiency, and sustainable supply chain practices. By turning current weaknesses into strengths, the company can achieve long-term growth, global competitiveness, and operational excellence.

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## Appendix I: Questionnaire

**Title:** Supply Chain Management Practices in the Pharmaceutical Industry: A Case Study on Delta Pharma Ltd.

### **Purpose:**

This questionnaire has been developed to collect information for academic research on the supply chain management practices of Delta Pharma Ltd. All responses will be kept confidential and used solely for academic purposes.

### **Section A: General Information**

1. Department/Division: \_\_\_\_\_
2. Designation: \_\_\_\_\_
3. Years of Experience in the Company: \_\_\_\_\_
4. Gender:  Male     Female     Other
5. Educational Qualification: \_\_\_\_\_

### **Section B: Supply Chain Management Practices**

Please mark the most appropriate answer for each statement using the scale below:

#### **Scale:**

1 = Strongly Disagree    2 = Disagree    3 = Neutral    4 = Agree    5 = Strongly Agree

No.	Statements
1	The company has well-defined Standard Operating Procedures (SOPs) for supply chain operations.
2	The company uses specialized software for supply chain management.
3	Stakeholders actively influence the supply chain management process.
4	The centralized distribution system ensures proper product distribution.
5	Key Performance Indicators (KPIs) are used to evaluate vendor performance.
6	Supply chain practices have improved supplier performance.
7	Pre-enlistment vendor audits are conducted to ensure sourcing quality.
8	The company organizes training/seminars for suppliers to improve quality and collaboration.
9	Integration of supply chain operations improves performance and responsiveness.
10	The supply chain system ensures timely delivery and product availability.

Section C: Supplier Management and Evaluation

No.	Statements
1	Suppliers are selected based on quality, reliability, and delivery record.
2	The company maintains long-term relationships with key suppliers.
3	Supplier performance is reviewed regularly using clear criteria.
4	The procurement department maintains transparency in all purchase decisions.
5	The supplier feedback mechanism helps in improving product quality.

**Section D: Additional Comments**

Please provide your suggestions for improving supply chain management practices at DELTA Pharma Ltd.:

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**Thank you for your valuable time and participation.**  
Your input will greatly contribute to this academic study.