Thesis Report

on

"The Impact of Reverse Logistics and Returns Management on Supply Chain: A Case Study on MJL Bangladesh PLC"

Submitted by

Md. Delowar Hossain

ID: MSCM2301028008

Program: MBA in Supply Chain Management (MSCM)

Semester: Spring 2025

Department of Business Administration

Sonargaon University (SU)

Submitted to

Department of Business Administration

Sonargaon University (SU)

Submitted for the partial fulfillment of the degree of MBA in Supply Chain Management



Sonargaon University (SU)

Date of Submission: April 28, 2025

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Supervised by

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Submitted for the partial fulfillment of the degree of

MBA in Supply Chain Management



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Date of Submission: April 28, 2025

Letter of Transmittal

April 28, 2025

Shakila Yesmin
Lecturer
Department of Business Administration
Sonargaon University (SU)

Subject: Submission of thesis paper on "The Impact of Reverse Logistics and Returns Management on Supply Chain: A Case Study on MJL Bangladesh PLC".

Dear Madam,

I am hereby submitting my thesis paper entitled on "The Impact of Reverse Logistics and Returns Management on Supply Chain: A Case Study on MJL Bangladesh PLC" which was assigned to me as a requirement for the completion of the MSCM Program. I have discovered this paper very interesting, beneficial, and insightful.

The entire report is based on my practical experience in MJL Bangladesh PLC. I expect this paper to be informative as well as comprehensive. This thesis will help me a lot in my future career life. Thank You very much for your guidance and cooperation during the course without which this thesis paper cannot be completed.

Moreover, if you have any further inquiries concerning any additional information, I would be very pleased to clarify that.

Yours Sincerely

_____

Md. Delowar Hossain
ID: MSCM2301028008
Program: MBA in Supply Chain Management (MSCM)
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Declaration of Student

This is to notify you that, the thesis paper on "The Impact of Reverse Logistics and Returns Management on Supply Chain: A Case Study on MJL Bangladesh PLC" has been prepared as a part of my dissertation formalities. It is an obligatory part of my MSCM program to submit a thesis paper. Moreover, I was inspired and instructed by Shakila Yesmin, Lecturer, Department of Business Administration, Sonargaon University (SU). I am further declaring that I did not submit this report anywhere for awarding any degree or certificate.

Yours Sincerely

Md. Delowar Hossain

ID: MSCM2301028008

Program: MBA in Supply Chain Management (MSCM)

Major: Supply Chain Management

Sonargaon University (SU)

Letter of Authorization

This is to certify that the thesis report "The Impact of Reverse Logistics and Returns Management on Supply Chain: A Case Study on MJL Bangladesh PLC" has been prepared as a part of completion of the MSCM program from the Department of Business Administration, Sonargaon University (SU), carried out by Md. Delowar Hossain, bearing ID: MSCM2301028008 under my supervision. The report or the information will not be used for any other purposes.

I wish him every success in life.

_____

Shakila Yesmin

Lecturer

Department of Business Administration

Faculty of Business Studies

Sonargaon University (SU)

Acknowledgment

In the beginning, I would like to convey my sincere appreciation to the Almighty Allah for giving me the strength and ability to finish the task.

I want to thank my academic supervisor **Shakila Yesmin**, Lecturer, Department of Business Administration, Sonargaon University (SU), provides me with all the necessary help for the completion of this report. I want to give the greatest thanks to her for guiding me as a supervisor to start and complete this report successfully.

The opportunity I had with MJL Bangladesh PLC is a great chance for deep learning and professional development. I consider myself a very lucky individual as I was provided with an opportunity to be a part of it. I am also grateful for having a chance to meet so many wonderful people and professionals who led me through this period.

I would like to express my deep sense of thankfulness to **Mr. Shibbir Ahmed**, Manager, HR MJL Bangladesh PLC & **Eng. Partha Sharathi Bhowmik**, Head of Supply Chain Management, MJL Bangladesh PLC for his enormous help and endless support throughout the dissertation period.

And last but not the least; thanks to all my office colleagues working MJL Bangladesh PLC and the opportunity I had with MJL Bangladesh PLC is a great chance for deep learning and professional development. I consider myself a very lucky individual as I was provided with an opportunity to be a part of it. I am also grateful for having a chance to meet so many wonderful people and professionals who led me through this period.

Abstract

The Lubricant sector in Bangladesh has witnessed significant growth in recent years, marked by heightened competition and evolving consumer preferences. MJL Bangladesh PLC, as a key player in this market, faces the challenge of not only sustaining its market position but also expanding its market share amidst a dynamic landscape. The study employs a case study methodology, utilizing both qualitative and quantitative data collection techniques. Through interviews with key stakeholders, analysis of promotional materials, and examination of market trends, this research seeks to uncover the intricate mechanisms behind MJL Bangladesh PLC's logistics and distribution strategy and return product management. Key findings reveal the multi-faceted approach adopted by MJL Bangladesh PLC, including a mix of traditional and digital Supply Chain channels, strategic partnerships, and innovative campaigns tailored to local preferences. Moreover, the study identifies the impact of reverse logistics and return product management and how to MJL Bangladesh PLC manages this issue to maintain customer's satisfaction and its business development. The implications of this research extend beyond MJL Bangladesh PLC to offer insights for practitioners and scholars interested in understanding the dynamics of logistics and distribution strategies within emerging markets. By dissecting the logistics and distribution tactics of a leading Lubricant company in Bangladesh, this thesis contributes to a deeper understanding of reverse logistics and return product management and how to cope up with the context of rapidly evolving industries and markets.

List of Acronyms

MJL	Mobil Jamuna Lubricant
PLC	Public Limited Company
ERP	Enterprise Resource Planning
WMS	Warehouse Management System
TMS	Transportation Management System
VTS	Vehicle Tracking System
CPA	Chattogram Port Authority
SCM	Supply Chain Management
RL	Reverse Logistics
RPM	Return Product Management
FCL	Full Container Load
LCL	Less Than Container Load
ROI	Return on Investment
OTD	On Time Delivery
LTL	Less Than Truckload
FTL	Full Truck Load
FOB	Free On Board

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Chapter 01

Introduction

1.1 Introduction

In today's fiercely competitive business landscape, organizations are increasingly recognizing the pivotal role of logistics services in driving organizational performance. Effective logistics and distribution and proper return product management practices can significantly impact a company's profitability, customer satisfaction, and overall market position. This research delves into the intricate relationship between Logistics practices and organizational performance, focusing on the case of intricate.

The lubricant industry is characterized by complex supply chains involving multiple stakeholders, stringent regulatory requirements, and the delicate handling of sensitive products. Efficient logistics and distribution practices are essential to ensure the timely and reliable delivery of medications to patients. By examining the specific context of the MJL Bangladesh PLC, this study aims to shed light on the impact of various SCM practices on the organization's performance.

This research will explore a range of SCM practices, including supplier relationship management, inventory management, logistics and transportation, return product management and information technology. The study will investigate how reverse logistics and return product management practices influence key performance indicators such as operational efficiency, cost reduction, customer satisfaction, and financial performance. By analyzing the case of MJL Bangladesh PLC, this research seeks to provide valuable insights for both academicians and practitioners in the field of SCM.

1.2 Origin of the Report

This report stems from the increasing recognition of supply chain management (SCM) as a critical determinant of organizational performance. In today's dynamic and interconnected business environment, effective SCM practices are essential to ensure the seamless flow of goods and services, reduce costs, and enhance customer satisfaction.

The lubricant industry particularly is characterized by stringent regulatory requirements, complex distribution networks, and the imperative to deliver high- quality products to customers in a timely manner. The MJL Bangladesh PLC, as a prominent player in this sector, faces unique challenges

in managing its reverse logistics and return product management. This study aims to investigate the impact of reverse logistics on the organizational performance of MJL.

1.3 Background of the Study

MJL Bangladesh PLC (MJL) is the leading lubricant production and Distribution Company in Bangladesh, serving as the sole distributor of Exxon Mobil Corporation. The company deals with Industrial and Automotive Lubricants, packaged in Cans, Pails, and Drums. With a blending plant in Patenga, Chattogram, and five key warehouses (Tejgaon, Bogura, Jashore, and Sylhet), MJL ensures nationwide distribution.

Reverse logistics (RL) and returned product management (RPM) are critical in the lubricant industry due to product expiry, damaged packaging, and customer returns. Efficient handling of returns can reduce costs, improve sustainability, and enhance customer satisfaction.

In recent years, there has been a growing recognition of the significance of SCM practices in driving organizational performance. Effective SCM can lead to reduced costs, improved efficiency, enhanced customer satisfaction, and increased profitability. However, the implementation of robust SCM practices is complex and requires careful consideration of various factors, such as supplier relationships, inventory management strategies, and logistics operations.

1.4 Scope of the Study

This study aims to investigate the impact of reverse logistics and returned product management on the organizational performance of MJL Bangladesh PLC. The research will delve into a comprehensive analysis of the lubricant company's supply chain operations focusing on key areas like reverse logistics and returned product management.

By examining the current SCM practices employed by the MJL, the study will identify strengths, weaknesses, and potential areas for improvement of logistics and product management. It will assess the effectiveness of these practices in achieving organizational goals, including cost reduction, improved efficiency, enhanced customer satisfaction, and increased market share.

The research will specifically explore the following aspects-

Logistics Practices: A detailed analysis of the logistics practices currently implemented by the MJL Bangladesh PLC, including inventory management, reverse logistics and returned product management.

Organizational Performance: An examination of the key performance indicators (KPIs) that measure the company's overall performance, such as revenue growth, profitability, customer satisfaction, and operational efficiency.

Impact Analysis: A thorough investigation of the causal relationships between logistics practices and organizational performance. This will involve identifying the specific ways in which effective logistics practices contribute to improved performance metrics.

Case Study Analysis: A deep dive into specific case studies within the MJL Bangladesh PLC to illustrate the practical application of logistics principles and their impact on organizational outcomes.

1.5 Objectives of the Study

Broad Objective

The broad objective of this study is to assess the impact of reverse logistics and returned product management practices on MJL Bangladesh PLC.

Specific Objectives

- To identify key reverse logistics practices implemented by MJL.
- To evaluate the relationship between specific logistics practices and organizational performance indicators such as efficiency, profitability, and customer satisfaction.
- To analyze the challenges faced in implementing effective logistics practices within the lubricant industry.
- To provide actionable recommendations for improving reverse logistics practices and return product management to enhance overall organizational performance.

1.6 Research Methodology

To achieve the objectives, this study will utilize a comprehensive research methodology combining both qualitative and quantitative approaches:

Primary Sources of Data

Data will be collected directly from the organization's stakeholders, including managers, employees, and supply chain partners, using the following methods:

- Surveys
- Experiments
- Personal Interviews

Secondary Sources of Data

Existing literature, reports, and industry data will be analyzed to supplement primary findings and provide a broader context:

- Books, manuals,
- Journals,
- Official publications,
- Web sites,
- Relevant industry reports,
- Scholarly articles.

1.7 Limitations of the Study

The scope of this study is limited to the MJL Bangladesh PLC. While this case study provides valuable insights into the impact of logistics practices on organizational performance within a specific context, it is important to acknowledge the limitations inherent in such a focused approach.

- The findings of this study are specific to the MJL Bangladesh PLC and may not be directly applicable to other organizations, particularly those operating in different industries or geographical regions.

- The unique characteristics of the lubricant industry, such as stringent regulatory requirements and complex supply chains, may influence the impact of reverse logistics and returned product management practices.
- The availability and quality of data can significantly impact the depth and reliability of the analysis.
- Potential limitations include data inconsistencies, missing data, and the sensitivity of certain information, which may restrict access to crucial data points.
- The study is limited by the specific timeframe under consideration. Changes in market dynamics, technological advancements, and organizational strategies can influence reverse logistics and returned product management practices and their impact on performance over time.
- A longer-term perspective may provide a more comprehensive understanding of the long-term effects of reverse logistics and returned product management initiatives.
- A case study approach, while providing rich contextual insights, may not allow for broad generalizations.
- The findings may be influenced by specific circumstances and may not be representative of the broader population of lubricant companies.
- External factors such as economic conditions, geopolitical events, and natural disasters can significantly impact supply chains and organizational performance.

Chapter 02

Literature Review

2.1 Concept of Reverse Logistics

Reverse Logistics refers to the process of moving goods from their final destination (typically the customer) back to the manufacturer, retailer, or another point in the supply chain for the purpose of recapturing value, proper disposal, or reuse. It encompasses all activities related to handling products after their sale, including returns, refurbishment, recycling, and waste management. Industries like e-commerce, automotive, electronics, and retail heavily rely on reverse logistics to manage returns and reduce waste. It is a critical part of modern supply chain management. Reverse logistics helps companies reduce costs, recover value, enhance sustainability, and improve customer satisfaction.

2.2 Evolution of Reverse Logistics

Reverse logistics has evolved significantly over time, transitioning from a cost-centric returns process to a strategic function that enhances sustainability, customer satisfaction, and profitability. The evolution of reverse logistics reflects broader changes in business practices, consumer expectations, environmental awareness, and technological advancements. Reverse logistics has evolved from a passive cost center to a strategic, technology-driven, and sustainability-focused component of supply chain management. Businesses now recognize its role in cost savings, customer loyalty, and environmental responsibility, making it a critical function in the modern economy.

2.3 Theoretical Frameworks in Reverse Logistics

Several theoretical frameworks underpin SCM practices, including the resource- based view, transaction cost economics, and the systems theory. These frameworks provide insights into the strategic decision-making processes involved in managing supply chains, emphasizing factors such as supplier relationships, cost optimization, and organizational resilience. These include:

Closed-Loop Supply Chain (CLSC) Theory

- Forward\ Flow: Traditional supply chain (production → distribution → customers).
- Reverse Flow: Returns, remanufacturing, recycling → reintegration into production.

Transaction Cost Economics (TCE)

- Costs of coordination, contracting, and monitoring influence RL decisions.
- Helps decide between 3PL (third-party logistics) vs. internal handling.

Resource-Based View (RBV) Theory

- Focus on unique capabilities (e.g., efficient returns processing, refurbishment tech).
- Firms like Dell and HP use RL for cost recovery & brand loyalty.

Stakeholder Theory

- Regulatory compliance (e.g., WEEE Directive for e-waste).
- Consumer demand for sustainability (e.g., H&M's garment recycling).

Game Theory in RL Networks

- Cooperation vs. competition in take-back programs.
- Incentive models for consumer returns & recycling participation.

Systems Theory

- Interconnected processes (e.g., returns affect inventory, warehousing, production).
- Used in dynamic RL optimization models.

Circular Economy (CE) Framework

- Design for disassembly (e.g., Fairphone's modular phones).
- Extended Producer Responsibility (EPR) laws.

Lean & Green Reverse Logistics

- Minimizing returns processing time & costs.
- Reducing carbon footprint of RL operations.

2.4 Key Components of Reverse Logistics

The key components of reverse logistics refer to the core elements involved in managing the return flow of goods, materials, or information from the customer back to the company or supply chain. These components ensure that reverse logistics processes are efficient, cost-effective, and aligned with business and sustainability goals. Here's a broad overview:

Product Returns

- Handling of customer returns due to defects, damage, dissatisfaction, end-of-life, or warranty claims.
- Involves return authorization, inspection, and decision-making (resell, repair, recycle, or dispose).

Return Management Systems (RMS)

- Technology platforms or processes used to track, authorize, and process returned items.
- Ensures visibility and efficiency across the reverse supply chain.
- Often integrated with inventory, CRM, and ERP systems.

Remanufacturing, Refurbishing, and Repair

- Assessing returned goods and determining whether they can be: Remanufactured (rebuilt to like-new condition), Refurbished (cleaned, tested, and resold), or Repaired (fixed and returned to the customer).
- Helps recover product value and reduce waste.

Recycling and Waste Disposal

- Non-reusable products are disassembled for materials recovery (e.g., metals, plastics).
- Ensures compliance with environmental regulations and promotes sustainability.
- Safe disposal of hazardous or non-recyclable components.

Reverse Logistics Network Design

- Planning the infrastructure and logistics needed for collecting, transporting, sorting, and processing returned goods.

- Includes collection points, return centers, warehouses, and transportation systems.

Inventory Management

- Managing inventory of returned goods, spare parts, or refurbished items.
- Requires specialized strategies due to uncertainty in return timing, condition, and quantity.
- Customer Service and Communication
- Key to facilitating returns smoothly and maintaining customer satisfaction.
- Includes return policies, support channels, and reverse shipping instructions.

Performance Measurement and Analytics

- Use of KPIs and analytics to evaluate reverse logistics efficiency and effectiveness. Common metrics: return rate, recovery value, processing time, and cost per return.
- Supports continuous improvement and decision-making.
- Third-Party Logistics (3PL) and Outsourcing
- Some companies outsource parts or all of their reverse logistics to specialized service providers.
- 3PLs offer expertise in handling returns, remanufacturing, recycling, and compliance.

2.5 Importance of Reverse Logistics in Modern Business Practices

Reverse logistics (RL) has evolved from a cost center into a strategic business function that drives profitability, sustainability, and customer satisfaction. In today's competitive and eco-conscious market, RL plays a crucial role in supply chain optimization, regulatory compliance, and brand reputation. Below are the key reasons why reverse logistics is indispensable in modern business:

Enhancing Customer Satisfaction and Loyalty

- Efficient return processes improve the customer experience, especially in e-commerce, where high return rates are common.
- Flexible and transparent return policies increase trust and encourage repeat business.
- Cost Reduction and Value Recovery
- Businesses can recover value from returned, defective, or unused products through refurbishing, remanufacturing, or recycling.

- Proper reverse logistics can reduce costs associated with waste disposal, warehousing, and inventory management.

Regulatory Compliance

- Governments and international bodies increasingly enforce take-back laws, e-waste directives, and sustainability regulations.
- Reverse logistics enables businesses to comply with environmental standards and avoid legal penalties.
- Environmental Sustainability
- Supports waste reduction, resource conservation, and lower carbon footprints by reusing or recycling materials.
- Contributes to the circular economy, which focuses on keeping products and materials in use for as long as possible.

Competitive Advantage

- Companies with efficient reverse logistics can differentiate themselves in the market.
- Ability to offer refurbished or second-life products at lower prices while maintaining profitability.
- Better Inventory and Asset Management
- Helps manage returned inventory and unused goods more effectively.
- Improves tracking, accountability, and optimization of supply chain assets.

Supports Product and Service Innovation

- Insights from returned products help companies improve quality, design, and customer service.
- Feedback loops support continuous improvement in products and logistics processes

Enables New Business Models

- Facilitates product-as-a-service, rental, and subscription-based models by enabling product recovery and reuse.
- Encourages innovation in packaging, modular design, and disassembly.

2.6 Review of Relevant Literature on Reverse Logistics in MJL Bangladesh PLC

A broad review of relevant literature on reverse logistics in MJL Bangladesh PLC involves examining available academic, industry, and organizational sources that discuss how MJL Bangladesh—primarily an energy and lubricant company—manages reverse logistics processes. Since direct academic studies specifically focused on MJL may be limited, the review typically draws from a combination of:

General Reverse Logistics Practices in the Lubricants Industry

- The lubricants sector commonly deals with used oil recovery, re-refining, and container reuse or disposal.
- Literature suggests reverse logistics in this sector supports: Environmental compliance (hazardous waste management), cost recovery from reprocessed oil and corporate social responsibility (CSR) initiatives.
- MJL, being involved in the distribution of Mobil lubricants, is expected to align with global best practices set by ExxonMobil in areas like waste oil collection and sustainable packaging.

Industry Reports and Case Studies from Bangladesh

- Several industry reports on supply chain management in the oil and gas sector in Bangladesh highlight challenges like: Lack of structured return systems, limited public awareness of proper lubricant disposal and need for collaboration with government agencies for waste oil collection.
- Companies like MJL may be part of broader industry initiatives aimed at improving waste oil recovery and safe disposal.

Academic and Institutional Studies in Bangladesh

- Local university research and theses often focus on reverse logistics in the FMCG and energy sectors.
- Some of these might reference MJL or similar companies to highlight emerging practices, challenges, and policy recommendations.

- Topics may include logistics optimization, hazardous waste management, and public-private partnerships for recycling infrastructure.

Challenges Identified in the Literature

The reverse logistics system in Bangladesh faces several logistical and regulatory challenges, including:

- Poor infrastructure for return flows,
- Limited consumer awareness of disposal processes,
- High cost of collection and reprocessing,
- Need for stronger policy support and enforcement.

2.7 Applying Reverse Logistics Insights to MJL Bangladesh PLC

Applying Reverse Logistics Insights to MJL Bangladesh PLC involves aligning proven strategies and best practices in reverse logistics with the company's operations, industry context, and sustainability goals. As a leading energy company in Bangladesh—primarily involved in the import, blending, and distribution of lubricants—MJL can greatly benefit from integrating structured and efficient reverse logistics systems.

Here's a broad perspective on how reverse logistics insights can be applied to MJL Bangladesh PLC:

Enhancing Used Lubricant Oil Recovery

- **Insight:** In the lubricants industry, a major reverse logistics focus is on the collection and reprocessing of used oil.
- **Application:** MJL can implement or expand a used oil return program in collaboration with service centers, garages, and industrial clients. This reduces environmental harm and supports sustainable resource use.
- **Benefit:** Enhances MJL's environmental compliance, reduces disposal costs, and creates potential for re-refining operations or partnerships.

Reuse and Recycling of Packaging Materials

- **Insight:** Reverse logistics encourages the return and reuse of drums, bottles, and containers used in packaging.
- **Application:** MJL can establish systems to retrieve used lubricant drums or plastic containers from customers and distribution partners.
- **Benefit:** Reduces raw material costs, minimizes plastic and metal waste, and supports corporate sustainability targets.

Return Management and Customer Service

- **Insight:** Efficient return systems improve customer satisfaction and operational transparency.
- **Application:** MJL can develop a return management platform that allows B2B customers to return defective or excess products in a controlled and trackable way.
- **Benefit:** Increases customer trust and enables better management of reverse inventory and warranty claims.

Reverse Logistics Network Design

- **Insight**: Effective reverse logistics requires dedicated logistics infrastructure and planning.
- **Application**: MJL could invest in collection points, reverse warehouses, or partnerships with third-party logistics providers for efficient product returns and waste handling.
- **Benefit**: Streamlines return processes and reduces operational bottlenecks across the supply chain.

Compliance with Environmental and Industry Regulations

- **Insight**: Reverse logistics is key for meeting regulatory and sustainability requirements.
- **Application**: MJL can align its reverse logistics activities with national waste management policies and global standards from partners like ExxonMobil.
- **Benefit**: Ensures regulatory compliance, reduces risk, and strengthens the company's environmental reputation.

Leveraging Technology and Data Analytics

- **Insight**: Modern reverse logistics is enhanced by data tracking, IoT, and analytics.
- **Application**: MJL can use RFID/barcoding and inventory systems to track returns, monitor product conditions, and predict return trends.
- **Benefit**: Increases efficiency, reduces costs, and improves decision-making across logistics operations.

Supporting Circular Economy Initiatives

- **Insight**: Many leading firms are transitioning toward circular economy models through reverse logistics.
- **Application**: MJL can explore circular models by investing in product lifecycle extension, such as lubricant recycling or second-life packaging.
- **Benefit**: Creates new revenue streams, reduces environmental impact, and aligns with global sustainability trends.

Chapter 03

Organizational overview

3.1 History

MJL Bangladesh PLC is a joint venture company between EC Securities Limited (a subsidiary of East Coast Group), and state-owned Jamuna Oil Company. The journey of blending world-class lubricants in Bangladesh started in 1998 when Mobil Corporation, later known as Exxon Mobil Corporation, decided to set up Mobil Jamuna Lubricants Limited in partnership with the state-owned Jamuna Oil Company Limited. Considering this, MJL Bangladesh PLC is a joint venture company between EC Securities Limited, a subsidiary of East Coast Group, and state-owned Jamuna Oil Company.

MJL Bangladesh PLC envisioned that Bangladesh would be one of the few countries in the region to blend high-quality lubricants. Accordingly, it commissioned a state-of-the-art Lube Oil Blending Plant (LOBP), the first of its kind in the country in May 2003. Since then the production of this plant and marketing activities of MJL Bangladesh PLC has expanded greatly.

This zero-emission Plant strictly follows the quality programs, starting from receiving the base oils from ExxonMobil and additives sourced from other global suppliers as per ExxonMobil's Product Integrity Management System (3PIMS) recommendation and formulation. Besides, the Plant is certified by ExxonMobil Quality Practices & Guidelines (QP&G), Third Party Product Integrity Management System (3PIMS), Bureau Veritas (BV) for ISO 9001-2015, ISO 14001:2015 & ISO 45001:2018 and Bangladesh Accreditation Board (BAB) for ISO/IEC 17025:2017. An incredible team of highly qualified, trained, and skilled personnel operates the Plant with a guarantee of outstanding product quality assurances.

The standard that distinguishes MJL Bangladesh in the market is its customer service policy. With a nationwide supply chain to cater to the lubricant needs of the country, MJL Bangladesh strictly follows a "customer first" policy. The success of its service lies in customer satisfaction. Thus, to achieve the goal, the engineering support service personnel work with utmost dedication and identify the right products and services for the customer's needs. One can easily find in the market a professional array of quality products blended and marketed by MJL Bangladesh PLC.

The strength of this company reflects on this practice that where there is an engine there is the presence of MJL Bangladesh PLC to give appropriate lubrication solutions. Thus, the lubricants blended and marketed by MJL Bangladesh PLC are being used in powering the engines touching

all cornerstones of modern developments of the country including motor vehicles, locomotive engines, river, sea, and ocean-going vessels, aviation and power, and other sectors of the country.

Being a shining example of Technology Transfer in the country, MJL Bangladesh has created direct employment opportunities for more than 150 people with over 2000 associated jobs, to significantly add value addition in lube blending and world-class lubricants in Bangladesh.

3.2 Vision

To retain market leadership, focusing on long-term business sustainability and selling productivity with consistent growth potential.

3.3 Mission

To support our customers with unsurpassed technical expertise for continuous value-addition, while ensuring timely delivery and maintaining product integrity.

3.4 Awards and Recognitions

- On behalf of MJL Bangladesh PLC, M. Mukul Hossain, CEO (Right) receiving ICSB National Award 2016 for Corporate Governance Excellence (Gold Award) in the Engineering, Fuel & Power Companies Category.
- MJL Bangladesh PLC has obtained the "Best Taxpayers Award" for fiscal 2016-17.
- MJL Bangladesh PLC won the ICSB 6th National Award 2018 (Gold Award) for Corporate Governance Excellence in Fuel and Energy Category.
- MJL Bangladesh Limited was awarded the ICMAB Best Corporate Award- 2021 under the oil, gas, and energy companies' category for corporate governance excellence.
- MJL Bangladesh PLC. (MJLBPLC) has been awarded with the 11th ICSB National Award-2023 for Corporate Governance Excellence.

3.5 Corporate Values

MJL Bangladesh PLC's business values conform to discipline and ethical nurturing to navigate the moral attributes into action and keep the company's well-being firm and rigid in the long run, which eventually brings prosperity to consumer relations.

- **Integrity**

The moral values that we practice should not become obsolete after a few years, it must be an ongoing endeavor that allows us to reach new heights in our business by maintaining applicable ethical standards.

- **Continuous learning**

Keeping updated with modern policies gives us a competitive edge and enables us to implement modern facilities into business proceedings in hopes to establish groundbreaking standards in the industry.

- **Innovation & implementation**

Innovation is something which we thrive towards implementing to our production and business regulations to bring light to the industry; maintaining modern conformity of revolution in petroleum products and various services.

- **Teamwork**

Team spirit is the focal point of MJL Bangladesh PLC's success, which continuously enables the company towards excellence through motivational and influential factors.

- **Health, safety & environment**

The transparency of the company's business proceedings exhibits the concerning factor to keeping the environment safe and healthy. Also, the sustainability measures of MJL Bangladesh PLC portray the dedication to society and nature.

- **Customer focus**

Customer satisfaction stays our main focus all throughout our steps of creating excellence in petroleum products as we monitor and enable top-notch services that leave no space for complaints.

3.6 Products Image of MJL Bangladesh PLC













3.7 Products Categories of MJL Bangladesh PLC

This is the core business area for MJL Bangladesh. The company is the sole authorized distributor

Of Mobil branded lubricants in Bangladesh.

- **Automotive Lubricants**

  For use in passenger cars, motorcycles, trucks, and buses. Key products include:

  - Mobil 1™ (fully synthetic motor oil)
  - Mobil Super™ series (semi-synthetic and mineral oils)

- Mobil Delvac™ (diesel engine oils for commercial vehicles)

- **Industrial Lubricants**
  Used in manufacturing and heavy industries to ensure smooth operation of machinery and equipment.
  - Hydraulic oils
  - Gear oils
  - Compressor oils
  - Turbine oils

- **Marine Lubricants**
  Specialized lubricants designed for marine vessels and engines.

3.8 Products Packaging of MJL Bangladesh PLC

MJL Bangladesh offers lubricants in three primary packaging formats:

A. Can (Metal/Plastic Containers)

- **Sizes:** Typically 1-liter, 2-liter, 4-liter, and 5-liter cans.
- **Usage:** Mostly for retail consumers, automotive workshops, and small-scale industrial use.
- **Features:**
  - Durable metal or high-quality plastic containers.
  - Secure sealing to prevent leakage.
  - Branded labeling with product details (grade, viscosity, specifications).

B. Pail (Plastic/Metal Pails)

- **Sizes:** Commonly 16-liter, 18-liter, and 20-liter pails.

- **Usage:** Medium-scale industrial and automotive applications.
- **Features:**
    - Sturdy, handle-equipped containers for easy transport.
    - Resistant to corrosion and leakage.
    - Clear product labeling for easy identification.

C. Drum (Steel/Plastic Drums)

- **Sizes:** 200-liter steel drums (most common) and intermediate bulk containers (IBCs).
- **Usage:** Large-scale industrial, power plants, and commercial automotive use.
- **Features:**
    - Heavy-duty, tamper-proof steel drums.
    - Forklift-friendly design for easy handling.
    - Printed with Mobil branding, safety warnings, and product details.

3.9 Distribution Process of MJL Bangladesh PLC

MJL Bangladesh PLC (MJL), the leading lubricant producer and marketer in Bangladesh, has established an efficient and well-integrated distribution network to ensure nationwide availability of its Mobil-branded lubricants. The company follows a structured supply chain model from production to delivery.

Blending and Packaging

- The lubricant production begins at MJL's state-of-the-art blending plant located in Patenga, Chattogram.
- High-quality base oils and additives are blended to meet international standards.
- The finished lubricants are then packaged into various Stock Keeping Units (SKUs):
    - Can (small packs for consumers)
    - Pail (medium-size packs for workshops and light industries)

- Drum (bulk packaging for large-scale industrial and commercial use)

Central Storage and Warehousing

- ❖ After packaging, lubricants are transported to MJL's central and regional warehouses located in:
  - Chattogram
  - Tejgaon (Dhaka)
  - Bogura
  - Jashore
  - Sylhet

These warehouses serve as key distribution hubs, maintaining inventory and preparing orders for regional delivery.

Order Fulfillment and Dealer Distribution

- ❖ MJL receives orders from a nationwide network of:
  - Authorized dealers
  - Retailers
  - Workshops and service centers
  - Industrial clients and fleet operators

- ❖ Based on these orders, lubricants are dispatched from the nearest warehouse to minimize delivery time and logistics cost.

Transportation and Delivery

- ❖ MJL uses its own fleet and third-party logistics partners to deliver products efficiently.
- ❖ Proper handling, safety, and quality checks are ensured during transportation.

End-User Availability

- **Lubricants reach:**
  - Retail outlets and automotive shops (for individual customers)
  - Workshops and garages (for on-site oil change and services)
  - Industrial clients and commercial users (via direct bulk supply)

This seamless distribution system ensures nationwide availability of MJL's lubricant products, supporting its leadership position in the Bangladeshi market.

Chapter 04

Reverse Logistics and Return Practices at MJL Bangladesh PLC

4.1 Return of Unsold or Damaged Products

- Dealers and Distributors occasionally return unsold, near-expiry, or damaged lubricant products due to market fluctuations or packaging issues.
- Returns are typically allowed under pre-agreed conditions, including:
    - Valid purchase documentation
    - Inspection by MJL's territory officers or supply chain team
    - Adherence to MJL's return policy timeline (e.g., within a specific period of purchase)

4.2 Used Packaging Return

- Bulk consumers and service centers using pail and drum SKUs often return empty containers as part of a reuse or recycling initiative.
- MJL encourages the return of used drums and pails to minimize environmental impact and reduce packaging waste.
- Returned packaging is:
    - Inspected for usability
    - Cleaned and refurbished if possible
    - Recycled or disposed of responsibly if damaged

4.3 Quality Issue-Based Product Recall

- If any product quality issues (e.g., off-spec lubricant, contamination) are identified at the customer end, MJL facilitates a recall and replacement through its customer service and technical support teams.
- Recalled items are sent back to the blending plant or central warehouse for inspection and documentation.
- This ensures both quality control and traceability within the system.

4.4 Reverse Logistics Channels

- MJL uses its existing distribution network in reverse for collecting returned products or packaging.

- Transportation is managed either by:
    - MJL's own logistics unit
    - Authorized third-party transporters
- Returns are consolidated at regional warehouses before being sent to the blending plant or designated recycling units.

4.5 Documentation and Inventory Adjustment

All returns are logged into MJL’s Enterprise Resource Planning (ERP) system for:

- Inventory reconciliation
- Financial adjustments (credit notes, refunds, or replacements)
- Compliance and audit tracking

4.6 Environmental and Compliance Considerations

- MJL’s reverse logistics practices align with its corporate sustainability goals.
- The company complies with local environmental regulations related to hazardous waste handling, used oil disposal, and plastic recycling.
- Periodic training is provided to dealers and logistics personnel on proper return handling and documentation.

Chapter-05

Findings & Discussion

5.1 Findings

- **Structured Return Process for Damaged or Unsold Products**

MJL has a defined return policy for damaged, defective, or unsold lubricant products. Returns are initiated by dealers or distributors and require approval through field officers or sales representatives. Returned items are checked for validity, including condition, purchase date, and supporting documents.

This structured return process ensures accountability and prevents misuse. However, the system is still partially manual in certain regions, which may lead to delays or inconsistencies in return handling. A fully digitized and real-time return tracking system could enhance transparency and speed.

- **Recovery and Reuse of Packaging Materials**

MJL promotes the return of used pails and drums from industrial clients and large service centers. These containers are inspected, cleaned, and either reused or recycled depending on their condition.

This practice contributes to environmental sustainability and reduces packaging costs. However, the collection system largely depends on customer cooperation and regional logistics capacity. A formalized incentive-based collection mechanism could improve the volume and consistency of returned packaging.

- **Reverse Transportation Uses Existing Logistics Network**

Returned products and packaging are transported using MJL's existing logistics routes, particularly during return trips from delivery trucks. This reduces transportation costs and improves operational efficiency.

Leveraging the forward logistics infrastructure for reverse flow is cost-effective. Nonetheless, reverse logistics is often a lower priority in scheduling, which may lead to delayed pick-ups. Dedicated scheduling or reverse logistics KPIs could balance this gap.

- **ERP-Based Return Documentation**

MJL uses its Enterprise Resource Planning (ERP) system to record return transactions, adjust inventory, and manage financial settlements such as credit notes or replacements.

This is the best practice that enhances accuracy and auditability. However, feedback from some stakeholders indicates that system updates can be slow in remote regions due to limited digital infrastructure or staff training gaps.

- **Environmental and Regulatory Compliance**

MJL maintains environmental responsibility by ensuring that returned lubricants (e.g., leaked or expired products) and packaging are disposed of or recycled in accordance with regulatory standards.

Compliance with environmental standards supports MJL's corporate image and risk management. Continued investment in training and certified disposal partnerships will be critical as regulatory scrutiny increases.

Chapter 06

Recommendations & Conclusion

6.1 Recommendations

- **Implement a Centralized Digital Return Management System**

Introduce a fully integrated, real-time return tracking module within the ERP system that allows dealers and field officers to initiate, approve, and monitor returns digitally. This will minimize delays, reduce manual errors, and ensure better visibility across the supply chain.

- **Develop a Formal Reverse Logistics Policy and SOP**

Establish standardized operating procedures (SOPs) for reverse logistics across all regional warehouses and distribution points. This should include clear guidelines on return eligibility, documentation, timelines, inspection, and disposal protocols.

- **Incentivize Packaging Recovery from Dealers and Clients**

Launch an incentive-based return program for used drums and pails to encourage higher recovery rates from industrial clients and workshops. Incentives may include discounts, reward points, or credit adjustments.

- **Increase Training and Awareness**

Conduct regular training sessions for warehouse staff, dealers, and logistics personnel on the importance of reverse logistics, safe handling of returned products, and accurate documentation practices.

- **Enhance Collaboration with Third-Party Recyclers**

Partner with certified waste management and recycling companies to responsibly dispose of expired or non-usable lubricants and packaging, ensuring full environmental compliance and corporate responsibility.

- **Measure and Monitor Return Metrics**

Establish key performance indicators (KPIs) to measure return rates, return processing time, packaging recovery percentage, and customer satisfaction. Regular monitoring can help identify process bottlenecks and areas of improvement.

6.2 Conclusion

The study on "The Impact of Reverse Logistics and Returned Product Management: A Case Study on MJL Bangladesh PLC" reveals that while MJL has a basic structure for managing product returns and packaging recovery, there is significant scope for improvement in terms of digital integration, operational standardization, and sustainability alignment.

Effective reverse logistics is not just a cost-recovery mechanism—it also supports customer retention, inventory accuracy, environmental sustainability, and brand reputation. For a market leader like MJL, investing in a more proactive and data-driven return management system will enhance overall supply chain resilience and future competitiveness.

As the lubricant industry continues to grow and regulatory pressures increase, companies like MJL must treat reverse logistics not as a reactive function but as a strategic component of modern supply chain management. By adopting the above recommendations, MJL can strengthen its leadership in the Bangladeshi market while setting a benchmark for responsible and efficient reverse logistics practices.

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