

**Report On**  
**Risk Management in supply chain**

By  
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**ID: 19382028**

An internship report submitted to the BIGD in partial fulfillment of the requirements  
for the degree of Masters in Procurement and Supply Management

Institute of Governance and Development  
BRAC University  
April, 2021

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## **Declaration**

I, the undersigned, sincerely state that the project report is based on my own work performed during the course of our study under the supervisor of Abdullah Al Masud. I affirm that the statements made and the conclusions drawn are the result of my research work. I further certify that,

1. The work contained in the report is original and I have done it under the general supervision of My supervisor.
2. The work has not been shown to any other institution for any other degree / diploma / certificate in this University or any other university in Bangladesh.
3. I have followed the guidelines provided by the university when writing the report.
4. Whenever I have used materials (data, theoretical analysis and text) from other sources, I have provided owing praise them the merit in the text of the report and giving their details in the references.

Student Full Name & Signature:

---

Md. Kabir Uddin

**Student ID: 19382028**

Supervisor Full Name & Signature:

---

Abdullah Al Masud

Head of Supply Chain

Akij Resources Ltd.

Mobile No - 01755507105

## Letter of Transmittal

Date:

Niaz Ahmed Khan, Ph.D. (Wales)  
Post Doc. (Oxford)|  
Professor and former Chairman  
Department of Development Studies  
University of Dhaka.  
Dhaka 1000

Subject: Submission of report for the “Risk Management in supply chain”.

Dear Sir,

I would like to declare that I have completed my report on the “Risk Management in supply chain” at Akij Cement Company Ltd (ACCL) as a part of my MPSM program. It has been great contentment for me to have the opportunity to apply my academic knowledge in a practical field. The report was prepared based on the theoretical and practical learning on my job station from the last four months.

I have tried my level best to put meticulous efforts into preparation of this report. I think the report will give you at least a brief overview on the subject, which will also show that I have gained valuable experience through this report under your insightful supervision.

Thank you for inspiring me to work on this subject. Kindly accept my report and please do so.

Sincerely Yours

---

Md. Kabir Uddin  
Student ID: 19382028  
BRAC University  
66, Mohakhali, Dhaka – 1212

## **Non-Disclosure Agreement**

This nondisclosure agreement (the "Agreement") comes into play by and between your principal Md.- Kabir Uddin, Manager, Procurement. Akij Group with BRAC University, located at 66 Mohakhali, Dhaka 1212, Bangladesh for preventing the unauthorized disclosure of confidential information as defined below.

The parties agree to enter into a confidential relationship with respect to the disclosure of certain proprietary and confidential information.

1. "Confidential information" shall include all evidence or material that has or could have commercial value or other utility in the business in which the disclosing party is engaged.
2. Receiving party shall hold and maintain the confidential evidence in strictest confidence for the sole and exclusive benefit of the disclosing party.
3. Receiving party shall carefully restrict access to confidential evidence to students, employees, other organizations, contractors and third parties as is reasonably required and shall require those persons to sign non-disclosure restrictions at least as protective as those in this agreement.
4. Receiving party shall not, without the prior written approval of the disclosing party, use for the receiving party's own advantage, publish, copy, or otherwise disclose to others, or permit the use by others for their benefit or to the detriment of disclosing the party, any confidential information.
5. Receiving party shall return to disclosing any and all records, notes, and other written, printed, or tangible materials in its possession pertaining to confidential information immediately if disclosing party requests, it in writing.

DISCLOSING PARTY

Signature \_\_\_\_\_

Typed or Printed Name \_\_\_\_\_ Date: \_\_\_\_\_

RECEIVING PARTY

Signature \_\_\_\_\_

Typed or Printed Name \_\_\_\_\_ Date: \_\_\_\_\_

## **Acknowledgements**

I am very grateful to the management of Akij Cement Company Ltd. for their enormous support and unconditional access to information. With my heartiest gratitude, I would like to acknowledge a few individuals for their great support, encouragement and guidance in the completion of my report. First, I would like to thank my university supervisor Niaz Ahmed Khan for guiding me to complete the report successfully. He was always available and provided me with proper guidance, support and advice throughout the semester, without which my paper work would not be possible.

I cannot stay without giving thanks to my debt. supervisor Abdullah Al Masud (Head of supply chain). He really helped me a lot by providing valuable information.

I am glad to be at my university, for that I am standing here to earn my Master Degree successfully.

Sincerely Yours

---

Md. Kabir Uddin  
Student ID: 19382028  
BRAC University  
66Mohakhali, Dhaka – 1212

## **Executive Summary**

This report presents an analysis of Akij Cement Company Ltd. (ACCL) on risk management in supply chains. Providing a blueprint for companies to deal with supply chain complexity, it gives a brief overview of ACCL's journey in managing supply chain risks. This report focuses on practical problems that require research and investigation rather than technical issues. The diagnostic, design, forecasting, performance, and implementation phases are associated with these problems. This report describes these projects in detail, along with those areas where operations studies have not yet provided enough science to evaluate pragmatic solutions.

There are 23 business units, including Akij Cement Company Ltd. The company has developed a strong network throughout Bangladesh to maintain this exemplary product.

There are three parts to the report: part one explains the organization, part two introduces SC risk management, supply chain function & operations and part three summarizes existing mitigations, and part four summarizes the organization's operations.

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## **List of Acronyms**

ACCL	Akij Cement Company Ltd
SC	Supply chain
SR	Supply risk
RM	Risk management
SM	Supply management
OEM	Original equipment manufacturer
ERP	Enterprise resource planning
SCR	Supply chain risk
SCRs	Supply chain risks
SCM	Supply chain management
SCRM	Supply chain risk management
SCMP	Supply chain management process
SCRMT	Supply chain risk management tool
SKUs	Stock Keeping Unit
PCC	Portland Composite Cement
OPC	Ordinary Portland Cement

# Chapter I

## Introduction and Background

There are over 23 business units within Akij Cement Company Ltd. (ACCL) that operate in a variety of industries, such as cement, textiles, packaging, and many more.

ACCL's operational context is examined in this report: "Risk Management in the Supply Chain." Risk management is crucial to maintaining and enhancing ACCL's operational stability. ACCL explores supply chain risk management (SCRM). It includes procurement processes, inventory, production, and distribution risks.

A four-part report provides insights into the Akij Group's background, including its diverse business units, followed by a summary and conclusion. The following sections introduce SCRM and existing mitigation systems within ACCL.

The report explores SCRM in the following sections. There are several potential risks identified at various stages of the supply chain. A roadmap for improving supply chain resilience is provided. A major objective of the report is to contribute valuable insights to the broader discussion on effective supply chain risk management.

### 1.1 Objectives of the study:

- i) To identify the major risks in the process of SC in Akij Cement Co. Ltd. (ACCL).
- ii) To understand the existing system/policies/measures of mitigating the above risks and vulnerabilities.
- iii) To assess the strengths and weaknesses of the existing risk mitigation system in Akij Cement Co. Ltd. (ACCL).
- iv) To recommend possible improvement measures for making the risk mitigation system which is more effective

### 1.2 Methodology:

**Data Collection:** The data has been collected for this report from three sources:

**Primary Source:**

A Key Informant Interview (KII) has been taken of some people who are ACCL employees for writing this report.

These people are –

1. Md. Abdullah Al Masud, Head of SCM
2. Md. Mortuza Kasem, AGM, Import
3. Md. Asraf ud- douowla, Head of Logistic & Distribution
4. Md. Emran Hossain, Head of Warehouse & Store
5. Md. Sikder Shariful Islam, Manager, Procurement & supply
6. Md. Saladuun, Supply Chain & Planning
7. Mobasarul Alama, Foreign Procurement

These interviews provided the majority of information about procurement, inventory management, production and distribution. Further, a summary of the documents worked on has been prepared, including S&OP, stock management systems, payment records, cost analysis, etc.

This study used the KII and personal observation methods in addition to the KII.

### **Secondary Source:**

Supply chain risk management concepts have been explored through reading various journals, collecting information, and providing references. This report also included many ACCL policies and procedures.

### **1.3 Limitations of the study:**

- Scope Constraints: Focus is only on risk management in ACCL
- Temporal Factors: Study timeframe may not cover emerging trends or risk factors.
- Data Availability: Limitations or discrepancies in data may affect study comprehensiveness.
- Single-Case Focus: ACCL's organizational structure and risk profile may not fully represent broader contexts.

- Human Factor Variability: Subjectivity exists due to differences in interpretations and experiences within ACCL.

#### **1.4 Background of the Organization:**

Akij Cement Co. Ltd. (ACCL) began its journey on November 3, 2002 for flawless cement production. It adapts to consumer needs following with the vision of its founder, Late Sheikh Akij Uddin. The company focuses on studying construction engineering and embracing architectural changes in cement manufacturing. ACCL prioritizes consumer satisfaction and product quality, with a capacity of 3.35 million MT per year. As a sister concern of Akij Group, ACCL is the sole producer of fly-ash-free cement in Bangladesh, guaranteed to last over 100 years. It Imported machinery from renowned companies, with VRM technology to ensure top-notch quality.

#### **1.5 ACCL Quick Facts:**

The 3rd November, 2002 was not only the day of inception of Akij Cement Co. Ltd. but a courageous expedition of flawless cement according to the needs of the consumers.

- ❖ Established on 2002
- ❖ Total 1026 nos employee countrywide
- ❖ Latest VRM technology
- ❖ Production capacity MTs/Day 360x23=8280
- ❖ Own Sack Plant (Ad star woven bag factory) Bag Plant (Ad Star & Stitch Bag)
- ❖ 10 Mother Vessel and 39 Lighters for carrying our imported own Raw Materials 10 Mother Vessel & 39 Lighter Vessel
- ❖ Water & land way product distribution network Through Trucks & Bulk Heads both Own & rental solution. (Own Bulk Head 5 & Trucks 150)
- ❖ Most modern quality control management system

#### **1.6 Vision & Mission of the company:**

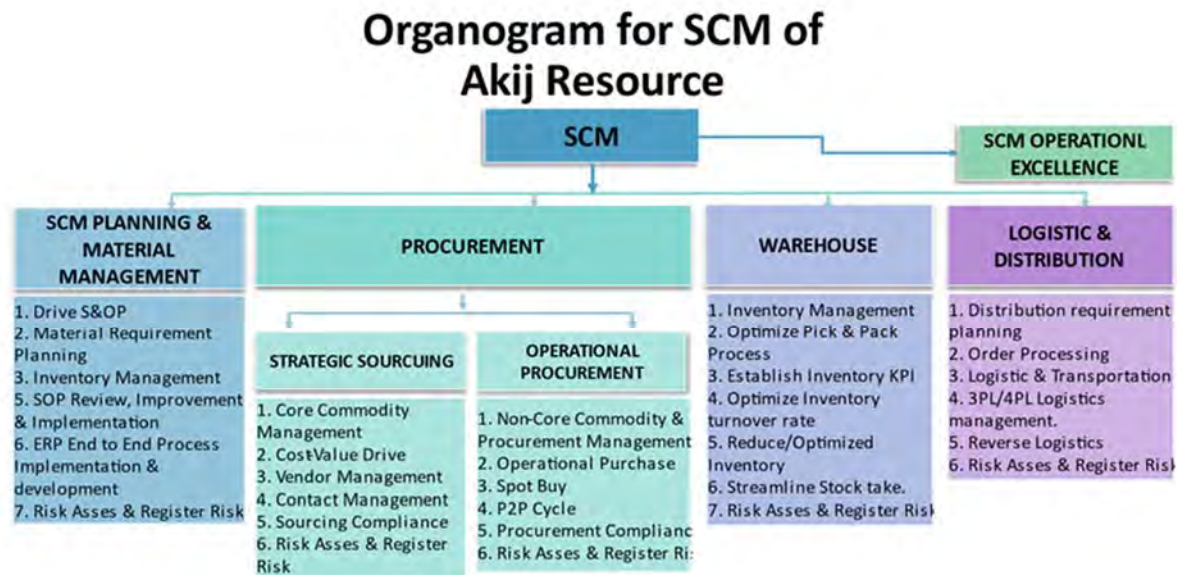
- Pioneering Excellence
- Sustainable Practices
- Industry Innovation
- Social Responsibility

- Customer-Centric Approach
- Financial Growth and Sustainability

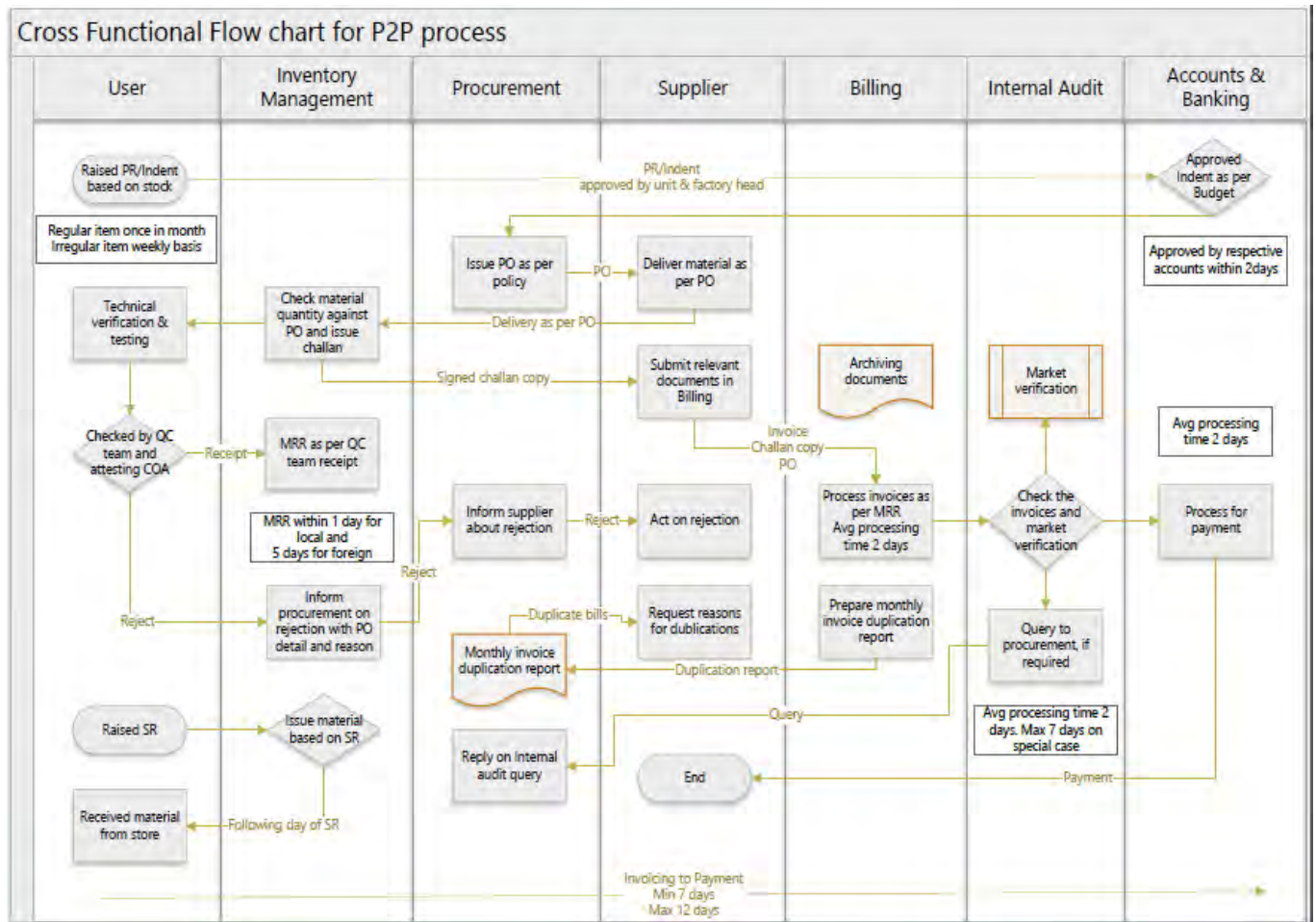
### 1.7 Management and Organizational organogram of ACCL:

- Chairman
- Managing Director
- Director
- Chief Operating Officer (COO)
- Chief Finance Officer (CFO)
- Chief Supply Chain Officer (CSCO)
- General Manager (Audit & Accounts)
- Deputy General Manager (Finance)
- Asst. General Manager (Total Quality Management)
- Asst. General Manager (Brand Marketing)
- Manager (Account, Audit & Procurement)

### 1.8 Organogram for SCM of Akij Resource



## 1.9 Procurement process of Akij Group:



Source: [The Human Resource office of Akij Group](#)

## 1.10 Product/ Services of ACCL:

Akij Cement currently have two SKU and it includes:

- Portland Composite Cement (PCC) Bag and Bulk:** Fly Ash free blast furnace iron slag based superior quality cement, especially for strong and durable concrete even in aggressive environments.
- Ordinary Portland Cement (OPC) Bag and Bulk:** OPC cement is suitable for high rise buildings. This product sets early on precast concrete containing over 95% high quality clinker with containing greater than 60% Tri Calcium Silicate (C3S).

## 1.11 Levels of Organizational Strategy:

**Corporate Level Strategy:** This is the highest level of organizational strategy. It involves in decision making which are related to the overall direction and scope of the entire organization.



Source: <https://theintactone.com/2018/12/24/sm-u3-topic-1-strategy-formulation-corporate-business-functional-strategy/>

**Business Level Strategy:** A business unit or segment is the focus of this level of strategy. It involves decisions about how a particular business unit will compete in its industry or market.

**Functional Level Strategy:** An organization's functional level is its level of strategy. Each functional area (such as marketing, operations, finance, etc.) should contribute to its overall business-level strategy.

## Chapter II

### Risk Management in Supply Chain: A Conceptual Review

#### Introduction:

The purpose of this review is to identify and clarify SCRM terminology, concepts, and definitions. Academic publications were reviewed to identify SCR theories, assessment models, modelling techniques, and approaches.

The following section provides a detailed explanation of SCR terms.

This chapter explores supply chain topics such as supply risk and supply chain management. It highlights the vulnerability of the supply chain to disruption.

It also describes the four phases of SCRM: risk identification, assessment, mitigation, and monitoring.

Additionally, it categorises supply chain risks and provides subcategories to understand them.

The chapter also discusses various internal and external risks using frameworks. These include SWOT, STEEPLE, and Porter's Five Forces. Each framework is thoroughly examined to understand business risks.

#### 2.1. Definitions of supply chain risk management terms:

1. **Risk:** Natural disasters, economic crises, political instability, terrorist attacks, and quality issues can all be considered risks in supply chains. (Davidson 2020:23).
2. **Supply Chain:** The supply chain is an interconnected network of organizations that work together to enhance product value by improving material and information flow.
3. **Supply Risk:** Individual supplier failures or supply market issues can affect a firm's purchasing ability to meet demand, disrupt regular operations, or threaten customer safety.
4. **Supply Chain Management:** Supply chain management integrates business processes from end users to original suppliers. Its goal is to provide information to customers along with valuable products and services.
5. **Supply Chain Risk Management (SCRM):** In order to reduce supply chain vulnerability and enhance resilience to disruptions, SCRM identifies and manages risks.
6. **Vulnerability:** Vulnerability refers to the risk of serious disruptions caused by both internal and external factors in the supply chain.



7. **Environmental Risk:** In the supply chain environment, environmental risks include accidents, protests, extreme weather, earthquakes, and other uncertainties.

### **2.3. What is Hazard/ Exposure & Risk Apatite?**

*Hazard:* Hazards are sources of potential harm, damage, or adverse health effects. They can be caused by people, organizations, or the environment.

*Risk Exposure:* The risk exposure is the potential loss from current or upcoming business activities. Usually, exposure is calculated by multiplying the probability of a risk incident by the potential loss.

Risk exposure = probability × impact

For example, if there is a 20% chance of a product failing on the market and the impact will cost \$1 million.

*Risk Appetite:* An organization's risk appetite refers to its tolerance of risk. Moreover, a company's risk capacity describes how much residual risk it will accept after controls are implemented. For example, when a company declares it will not take revenue-loss risks.

#### **2.3.1. Direct and Indirect Loss**

**Direct loss:** The majority of foreseeable losses are direct losses, including business and financial losses.

**Indirect Loss:** Any indirect loss includes lost profits, lost use, lost production, increased operating costs, lost business, lost business opportunities, reputation, goodwill, or any consequential or indirect loss.

### **2.4. Supply chain risk management process:**

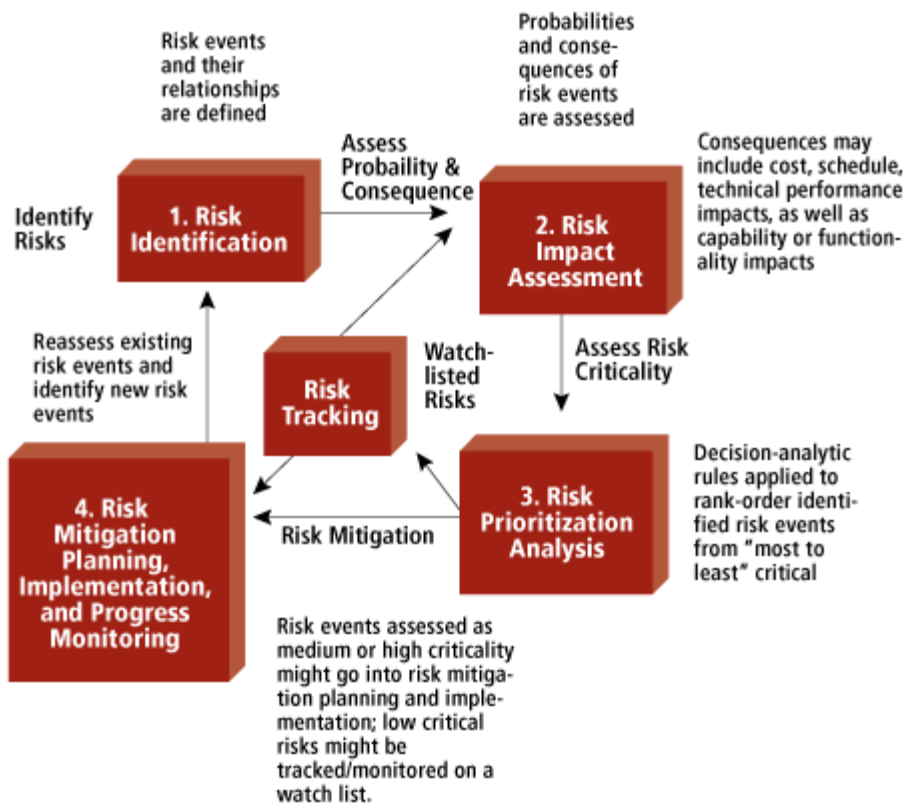
*Risk identification, assessment, mitigation, and monitoring:*



Fig. 2.4: Risk management phase

## 2.5. Phase 1: Risk identification

De Oliveira et al. (2018) indicate that risk identification is crucial to supply chain risk management. Consequently, companies must accept that only identification of risks can lead to any further risk management activity. Identification of risks means considering the ‘bigger picture’ of all potential risks. As a result, identifying SCRs is crucial because it helps understand them better. Further, it increases firms' awareness of SCR and increases SC action.



## 2.6. Phase 2: Risk assessment

Understanding these factors helps in better preparation and provides crucial information by giving an overview. Risk assessment is the second step of SCR. Assessing risk determines the severity of identified risks.



Fig: Risk assessment components

### 2.7. Phase 3: Risk mitigation

'Risk mitigation' is the third phase of the SCR process. It involves the development of a plan to counteract the risks identified in identification.

Stecke and Kumar (2009) state that mitigation strategies can ensure company survival.

### 2.8. Phase 4: Risk monitoring

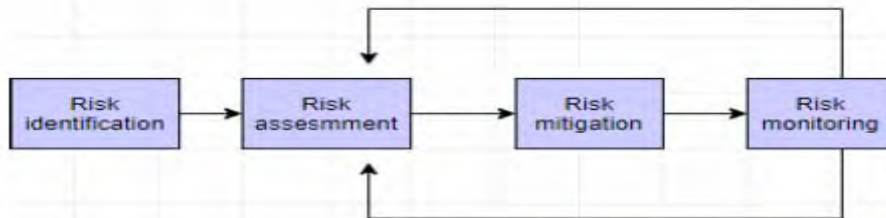


Fig. 2.3: Risk monitoring approach

### 2.9. Categories of risk in supply chain

Risk categories	Subcategory
Quality	Value of product
	Ease of problem solution

	Timeliness of corrective actions/responding
	Defects of million
Manufacturing risk	Changes in product design
	Machine breakdown
	Supplier material
Supplier dependence	Supplier manufacturing capacity or flexibility of supply source
	Dependence on a single source of supply
	Location
Procurement	Exchange rate risk
	Part price
	Long term versus short term contracts
Disruptions/disasters	Earthquake, flooding, and terrorism
	Transport/delivery

## **2.10. Risk Management System:**

Risk management systems are used by successful business farms to control and manage procurement, supply chain, manufacturing, and distribution risks. In addition to helping businesses prevent or mitigate uncertain losses, supply management involves a combination of goods, raw materials, and finished products. Effective risk management plays a key role in ensuring company profitability at all levels of the supply chain.

## **2.11. Internal & External source of risk**

- i. SWOT (internal/External)
- ii. STEEPLED (Risk from wider Environment)
- iii. Porters Five force (Industry competition)

### **SWOT (internal/External)**

The company faces internal risks such as personnel management, technology issues, and outdated software, as well as external risks including economic slowdowns and trade wars.

The SWOT analysis is a method of identifying a person or organization's strengths, weaknesses, opportunities, and threats relating to business competition or project planning. It is also known as a situational assessment or a scenario analysis.



Source: <https://corporatefinanceinstitute.com/resources/knowledge/strategy/swot-analysis/>

### **STEEPLED (Risk from wider Environment)**

STEEPLE stands for Social, Technological, Economic, Environmental, Political, Legal, and Ethical opportunities and threats.

The STEEPLE analysis illustrates the unpredictable factors that affect business activity when assessing overseas investments.

TAX rates, interest rates, government subsidies, and disposable income are some of the opportunities in the STEEPLE Analysis.

Businesses can suffer from external threats like a recession, oil crisis, higher tax rates, higher interest rates, roadworks, natural disasters, or major health epidemics.

### **Porters Five force (Industry competition)**

An industry analysis, also known as Porter's Five Forces Analysis, is a very useful tool for business strategists. It observes that profit margins vary by industry, which is due to its structure.

The Five Forces analysis determines the attractiveness of an industry. However, it can also be used to formulate strategy and understand the competitive landscape in which a company operates.

## Industry analysis as a tool to develop a competitive strategy

A company can develop a competitive strategy that defends against or influences competitive forces in its favor based on industry analysis. By understanding the sources of competitive forces, a company can:

- Highlight the company's critical strengths and weaknesses (SWOT analysis)
- Animate its position in the industry
- Clarify areas where strategic changes will result in the greatest payoffs
- Emphasize areas where industry trends indicate the greatest significance as either opportunities or threats



Reference: <https://learn.marsdd.com/article/industry-analysis-and-competition-using-porters-five-forces/>

### 2.12. Assess Operational risk in Supply chain

*Contract failure:* It's a risk management tool. In addition to minimizing the loss or damage that may occur due to non-performance of a contract (or contract failure), it also minimizes the risk of

the organisation curtailing its activities due to supply disruptions, a lack of resources, or breakdowns in supplier relationships.

*Financial Risk:* Financial risks may be internal arising from the organizations own financial structures and transactions.

*Quality failure:* Buying organizations for materials, components or other suppliers in a commercial setting, and marketing organizations for meeting customer and consumer quality expectations.

*Security of supply:* Supply risk is the risk associated with an organization's suppliers being unable to supply or supplying goods of inadequate quality. Securing supply is a basic function of the procurement and supply chain management function.

*Technology:* Both strategic and operational risks arising from technology dynamism and obsolescence, systems or equipment failure, data corruption or theft, new technology teething troubles systems incompatibility that is where buyer supplier systems need to be integrated and so on.

*Risk of outsourcing:* Outsourcing may be defined as the process whereby an organization delegates major non-core activities or functions, under contract to specialist external service providers, potentially on long term relational basis

*Risk of offshoring:* The terms 'offshoring' refers to the relocation of business process to a lower cost location, usually overseas. This practice is in essence a form of outsourcing, but the overseas element gives rise to additional risk management consideration.



## **Chapter – III**

### **Risk mitigation**

#### **Introduction:**

Supply chains in today's globalized business environment are exposed to a multitude of risks. It is important for companies like ACCL to manage these risks effectively to ensure efficient and uninterrupted operations. The ACCL framework examines supply chain risk mitigation and its importance.

A comprehensive overview of risk mitigation and its role in protecting the supply chain will be presented first. Afterward, specific risks faced by ACCL at various stages such as procurement, inventory, production, and distribution will be discussed.

The next chapter explains the existing mitigation systems implemented by ACCL. It evaluates their effectiveness in the following areas: quality control, contingency planning, inventory management, spare capacity, collaboration and vendor management.

Additionally, it discusses best practices for enhancing supply chain reliability. These include accurate forecasting, dual sourcing strategies, insurance coverage, and continuous improvements. It concludes with some recommendations for improving ACCL's supply chain to prevent disruptions. This comprehensive exploration will help ACCL to deal with an increasingly complex world and build a reliable supply chain.

#### **3.1 What is risk mitigation?**

Risk mitigation planning is the process of developing options and actions to enhance opportunities and reduce threats to project objectives.

#### **3.2. Process of mitigation:**

- Avoidance
- Acceptance
- Reduction or control
- Transference

#### **3.3. Procurement procedures:**

ACCL has issued a requisition for materials and services. It's approved by the Head of department. After approval the indent procurement department goes for sourcing or re-order. If it is an Assets

item then it's required for approval by the Management of ACCL. After getting the approval, the procurement department goes for purchase.

**System generated requisition:**

SBU Akij Cement Company Ltd.		Purchase Organization Local Procurement		Plant ACCL Narayanganj		Warehouse ACCL Factory									
From Date 11/01/2022	To Date 11/26/2022	Type Pending		<b>View</b>											
Request Code & Request Type Search <input type="text"/>															
SL	PR Code	PO Code	Request Type	PO Created By	PR Created By	Request Date	Item Name	Uom	Request Quantity	PO Quantity	Pending Qty	Receive Qty	Status	Purpose	Action
1	PR-ACCL-NOV22-26		Asset PR		Md. Biplop Hossain	2022-11-03	Fingertec R3 Finger Print Machine	Pices	1		1	0	Approved	Use for Office Building requested by Md. Munna	
2	PR-ACCL-NOV22-30	PO-ACCL-NOV22-78	Standard PR	Avishek Barua	Al Mamun	2022-11-03	Empty Cement Bag-PCC(Stitch)	Pices	1300000	1200000	100000	0	Approved	As Above	

**PO (Purchase order) issued:**



**Akij Cement Company Ltd.**  
 ACCL Factory- Wilson Road, Nobiganj, Kodomrosul, Bandor, Narayanganj  
**Purchase Order**

**Purchase Order No:** [PO-ACCL-NOV22-337](#) **Order Date:** 2022-11-27 **Status:** Pending **Warehouse:** ACCL PDD

Supplier: Akij Cement Company Ltd	Ship To: ACCL Narayanganj	Bill To: Akij Cement Company Ltd.
Email: info@akij.net	Bin No.	ACCL Factory- Wilson Road, Nobiganj, Kodomrosul, Bandor, Narayanganj
Attn: Akij Cement Company Ltd	PR No. <a href="#">PR-ACCL-NOV22-186</a>	
Phone: 01711555016		
Address: Nabiganj, Kadam Rasul, Narayanganj		

SL	ITEM	DESCRIPTION	UoM	QTY.	RATE	VAT (%)	VAT AMOUNT	TOTAL
1	PCC Akij Cement (Purchase)		Bag	700	451.05	9.74	3076.5	346487.589
							<b>Total</b>	<b>346487.589</b>

Partial Shipment	No	Freight	0
No of Shipment	0	Others Charge	0
Last Shipment Date	2022-12-12	Gross Discount	0
Payment terms	Credit	Commission	0
Payment days after MRR	25	<b>Grand Total</b>	<b>346487.589</b>
No of Installment	0		

**GRN format against the PO:**

SBU Akij Cement Company Ltd.	Plant ACCL Narayanganj	Warehouse ACCL Factory	From Date 11/01/2022
To Date 11/26/2022	Type Purchase Order	Purchase Order Code Purchase Order Code	<a href="#">View</a>

SL	Item Name	Item Code	PR Code	PR Date	PR Quantity	PO Quantity	Receive Quantity	Remarks
1	Grab Cylinder Seal Kit	177138004	PR-ACCL-NOV22-1	2022-11-01	2	2	0	
2	Dryer(Model-F-400)	1101011358	PR-ACCL-NOV22-21	2022-11-01	1	1	1	
3	Digital Magnetic Stirrer Hot Plate Model: LMS-1003	1101011359	PR-ACCL-NOV22-22	2022-11-01	1	1	1	

## Billing and payment procedure:

### Bill By Supplier Statement

SBU Akij Cement Company Ltd.	Purchase Organization Local Procurement	From Date 07/01/2022	To Date 11/07/2022	PO Issuer PO Issuer	<a href="#">Show</a>
Supplier M/S MAGNUM...	<a href="#">Show</a>				

SL	Bill Register No	Bill Type	Po No	Party Name	Bill No	Bill Date	Bill Amount	PO Date	Approve Amount	Pay Amount	Pay Date	Paid Date	Is Advice	Action
1	SI-ACCL-SEP22-73	Supplier Invoice	PO-ACCL-JUL22-222	M/S MAGNUM STEEL INDUSTRIES LTD	200019	2022-09-06	1,129,364.00	2022-09-06	1,129,364.00	1,129,364.00	2022-09-13	2022-09-19	No	
2	SI-ACCL-OCT22-407	Supplier Invoice	PO-ACCL-OCT22-10	M/S MAGNUM STEEL INDUSTRIES LTD	0008	2022-10-18	448,601.00	2022-10-18	448,601.00	448,601.00	2022-10-31	2022-11-02	No	

ACCL has done the process with the system generated PR, PO, GRN and billing process as per the above system generated system.

### 3.4. Identify Risk in procurement department

1. Inaccurate internal needs analysis.
2. Poor vendor selection.
3. Disorganized vendor management.
4. Non-compliance and crude contract management processes.
5. Error-prone, manual internal processing.
6. Delays in procurement.
7. Talent shortages.
8. Standardized procurement processes.

### 3.5. Suppliers Risk:

1. Price
2. Quality
3. Service

### 3.6. What is inventory risk?

Inventory risk is the probability of an organization being unable to sell its goods or the chance that inventory stock will decrease in value. ACCL has huge amounts of inventory and keeping track of one stock item is challenging enough.

#### Inventory Management through system generated

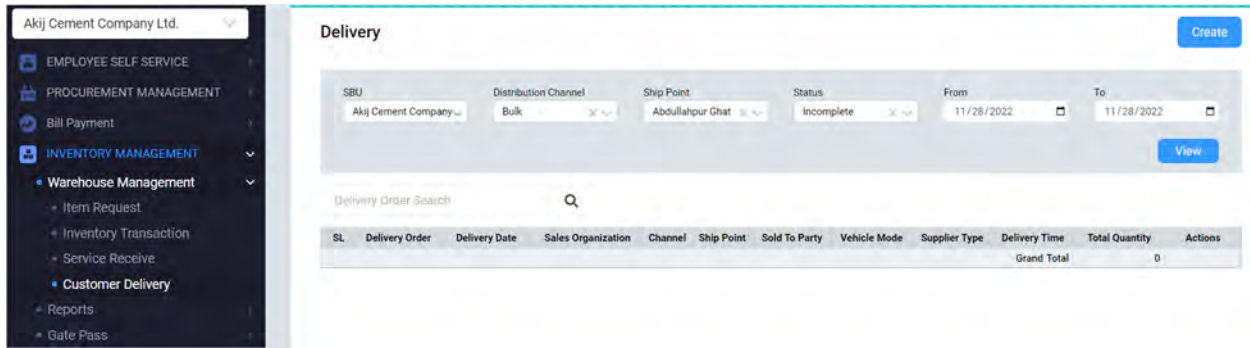
The screenshot displays the 'Item Request' interface of the Akij Cement Company Ltd. system. The sidebar on the left lists various modules, with 'INVENTORY MANAGEMENT' expanded to show 'Item Request'. The main area features a form with the following fields: 'Select SBU', 'Select Plant', 'Select Warehouse', and 'Status'. Below these are 'From Date' and 'To Date' fields, both set to 11/28/2022. A 'View' button is present. A search bar for 'Request Code' is located below the form. At the bottom, a table header is visible with columns: 'SL', 'Request Code', 'Request Date', 'Approval Status', and 'Action'.

### 3.7. Production risk:

1. Man- inexperience worker / employee
2. Machine – Machine disaster / fault
3. Materials – low quality materials
4. Method – different method used

### 3.8. Distribution risk:

A distribution channel, the insurer's business, and ultimately its financial sustainability can be impacted by distribution risks. Distribution risks can be similar to operational risks, which are unpredictable, but can pose significant financial and reputational risks.



### 3.9. Increase the stock level:

Stocks are the most traditional way to reduce risks regarding raw material and suppliers. ACCL has managed its safety stock level to prevent raw material shortages and variations. This prevents fluctuations and uncertainties about raw material supply.

### 3.10. Add spare capacity:

Spare capacity in companies and industries means they have the resources to increase production beyond normal levels. This flexibility helps to meet unexpected demand fluctuations. ACCL maintains spare capacity by renting facilities or equipment, subcontracting operations, and hiring additional workers when needed.

### 3.11. Increase collaboration and visibility:

Collaboration and transparency among supply chain partners enhance resilience. Close cooperation between the first and second tiers allows for better visibility and preparation for unexpected events to facilitate an optimal response.

### 3.12. Increase agility on operations:

A company's ability to adjust quickly and effectively to changing circumstances refers to its flexibility in its operations. It includes, for example, to redefine plans or strategies in the face of market, demand and supply volatility. The agility of the company could also be improved, so that new goods could be produced and delivered quickly.

### 3.13. Vendor rating

To ensure the best support from the supplier every year ACCL has evaluated the supplier. As A Result, it's become very easy to select the best supplier who ensures the price, quality and service.

### **3.14. Improve forecast and planning:**

With accurate demand predictions, ACCL is able to plan production. ACCL is often surprised by imprecise demand, which may increase costs or minimize profits. In order to make a more accurate forecast, more refined quantitative forecasting methods and a short-term forecast strategy can be used.

### **3.15. Dual or multiple sourcing strategy:**

A strategic purchasing approach is crucial. Through high-volume orders, single sourcing can reduce apparent costs and increase collaborations between partners. ACCL has multiple suppliers for most of the items, so this strategy is best in stable environments, but it can also amplify risk exposure. It minimizes the unavailability risk and lowers the price.

### **3.16. Insurance:**

The most important system for managing risk is insurance. It provides a powerful tool against very unlikely risks, but could have a major impact on the supply chain. It protects the company from strong financial losses when a supply chain disruption occurs by enabling normal operations and reducing variance. Natural catastrophes, such as hurricanes, earthquakes, flooding, fire, or even internal perils, such as machinery breakdown, are covered by ACCL insurance.

### **3.17. Conclusion and recommendation:**

This report begins with a literature review and an introduction to supply chain risk management concepts.

There are four steps for managing supply chain risks: identification, analysis, mitigation, and control, which are discussed in the second part of the research. Companies can learn about some different tools and approaches by reading this content.

Finally, this study concluded with some best practices for reducing supply chain risks against different types.

A variety of methods can be used to assess risk management in a supply chain and to build a solid and resilient supply chain. As a result, this report provides a concise overview of supply chain risk management literature and a guideline on how to improve supply chain resilience. Several companies could be examined for their implementation of these best practices.

### **Learning from the Internship**

- boosted professional growth.

- Provided comprehensive insights into cement industry operations.
- Key focus on supply chain risk management.
- Hands-on experience in identifying, assessing, and mitigating risks.
- Practical application of theoretical supply chain concepts.
- Enhanced understanding of procurement, production, and distribution.
- Development of problem-solving and decision-making skills.

## **Recommendations**

1. Enhanced Risk Identification Processes: Implement advanced technologies and data analytics tools for real-time monitoring and predictive analytics.
2. Integrated Risk Assessment Models: Develop comprehensive models considering risk probability, impact, and interdependencies.
3. Strengthening Supplier Relationships: Implement collaborative risk management strategies with key suppliers.
4. Diversification of Supplier Base: Reduce dependency by diversifying the supplier base.
5. Investment in Supply Chain Visibility Solutions: Implement advanced visibility solutions for real-time monitoring of the supply chain.

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