

Thesis Report
on
“Implementation of Green Supply Chain Management on RMG Sector in Bangladesh: A Case Study on R.K Group of Industries Ltd.”

Submitted by:

Md. Alauddin

ID: MBA2501034013

Program: MBA in Supply Chain Management (MSCM)

Major: Supply Chain Management

Department of Business Administration

Sonargaon University (SU)

Submitted to:

Department of Business Administration

Faculty of Business

Sonargaon University (SU)

**Submitted for the partial fulfillment of the degree of
MBA in Supply Chain Management (MSCM)**



Sonargaon University (SU)
147/I, Green Road, Panthapath, Dhaka
Date of Submission: 03 January, 2026

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Submitted for the partial fulfillment of the degree of
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Sonargaon University (SU)
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Date of Submission: 03 January, 2026

Letter of Transmittal

3 January, 2026

Dr. Md. Masud Rana

Associate Professor

Department of Business Administration

Sonargaon University (SU)

Subject: Submission of thesis report on —**Implementation of Green Supply Chain Management on RMG Sector in Bangladesh: A Case Study on R.K Group of Industries Ltd.**”

Dear Sir,

This is a great pleasure to submit the thesis report titled —**Implementation of Green Supply Chain Management on RMG Sector in Bangladesh: A Case Study on R.K Group of Industries Ltd.**” as a partial requirement for the fulfillment of my MSCM Course under the Department of Business Administration of the Sonargaon University (SU).

I have given due efforts to make this thesis report as fruitful one and to make it as informative as possible. I hope that this paper will not be the formality of academic course completion rather it will be a source of information for other purpose on this topic.

Yours sincerely

Md. Alauddin

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Declaration of Student

I do hereby declare that the thesis report title — **Implementation of Green Supply Chain Management on RMG Sector in Bangladesh: A Case Study on R.K Group of Industries Ltd.**” prepared solely by me and which has been submitted to the Department of Business Administration, Sonargaon University (SU) for achieving the MSCM Degree. This is an original work of mine. No part of this research has been submitted to any University or Institution for any Degree, Diploma or for other similar purposes.

Yours Sincerely

Md. Alauddin

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Letter of Authorization

This is to certify that the work presented in this **Implementation of Green Supply Chain Management on RMG Sector in Bangladesh: A Case Study on R.K Group of Industries Ltd.** is based on the work, carried out by the author herself under my supervision in Department of Business Administration, Sonargaon University (SU). It is also certifying that the work presented here is original and suitable for submission as the style and contents, for fulfillment of MSCM Program.

Dr. Md. Masud Rana
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Acknowledgement

Praise by Allah & thanks to Allah for patronizing me to finish this thesis report. I am very happy to finish it. It is a great Research of my life. It is a long cherished hope of my life to become a great supply chain professional. That's why I have admitted in the Department of Business Administration in Sonargaon University (SU) to fulfill my dream. But through my whole study life in this field, I did not get much more opportunities to examine and show my knowledge and skill in this wide field. Lastly I have got a great chance to make my study meaningful when I got the chance to prepare a thesis report **Implementation of Green Supply Chain Management on RMG Sector in Bangladesh: A Case Study on R.K Group of Industries Ltd.**

I acknowledge my grateful to respected course teacher **Dr. Md Masud Rana** for instructing me how to prepare a thesis report and his famous Books lectures on this subject help me to complete my task sincerely.

I am also thankful to my classmate as they help me to complete the thesis report. I am extremely paying my solitude to all the authors and writers whose works help me to draft this original Research paper.

Executive Summary

This case study explores the implementation of Green Supply Chain Management (GSCM) practices in the Ready-Made Garments (RMG) sector of Bangladesh, with a specific focus on R.K. Group Industries Ltd. As environmental sustainability becomes an increasing global concern, RMG manufacturers in Bangladesh are under pressure from international buyers and regulatory bodies to adopt eco-friendly and socially responsible practices across their supply chains. R.K. Group Industries Ltd., a mid-to-large scale garments manufacturer, has taken several initiatives to integrate green practices within its supply chain, particularly in green manufacturing, waste management, and environmental compliance. The company has installed energy-efficient machinery, established Effluent Treatment Plants (ETPs), and earned certifications such as ISO 14001 and OEKO-TEX, indicating its commitment to environmental sustainability.

However, the adoption of GSCM across all supply chain stages—especially in green procurement, logistics, and employee engagement—remains limited. The study reveals that most sustainability initiatives are driven by buyer requirements rather than internal strategic planning. Additionally, financial constraints, low awareness among workers, and insufficient government support hinder full-scale implementation of GSCM.

Despite these challenges, the study finds that the implementation of green practices has led to reduced operational costs, increased market competitiveness, and enhanced buyer trust, especially from environmentally-conscious Western retailers.

I have learned many things new from the thesis report program as, how to deal with people both inside and outside of the organization, thorough idea about the supply chain management of R.K group, developing skill and competencies of myself.

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List of Acronyms

SU	Sonargaon University
MBA	Master of Business Administration
DSE	Dhaka Stock Exchange Limited
SAP	Service Agreement Permeate
MTO	Make To Orders
BAD	Busoni A Date
AGM	Annual General Meeting
RAG	Re Approvisionnement Guaranty
NBR	National Board of Revenue
GED	Global Economy Downturn
GDP	Gross Domestic Product
SCM	Supply Chain Management
CRM	Customer Relationship Management
VMI	Vendor Management Inventory
R&D	Research And Development
B2B	Business to Business
C2C	Consumer to Consumer
B2C	Business to Consumer
DC	Distribution Center
EPS	Earning Per Share
TQM	Total Quality Management
ECR	Efficient Consumer Response
GPS	Global Positioning System
MSCM	Master of Supply Chain Management

Chapter-01
Introduction

1.1 Introduction

As a mandatory part of MBA program, all the students have to complete a course under an thesis program in any organization with a view to acquiring research knowledge.

In today's world education is not just limited to books and classrooms. Education now-a-days is understanding the real world and applying knowledge and education for the betterment of the society. Theoretical knowledge is not enough for a business student. There is a gap between the knowledge and practical knowledge. Our thesis program has been launched mainly to bridge the gap.

R.K Group is one of the market leaders in the readymade garments institution in Bangladesh. The company offers students the perfect opportunity to gain on-the-job experience by supporting and guiding them during their thesis program in the business areas. Through thesis students become aware of organizational culture and learn how to show professional excellence to a great extent. This learning helps them when they finally enter into practical field.

Garments business is a new dimension in the financial sector to build up the economic growth of a country. In the context of Bangladesh, garments market is very competitive. Therefore, it is a challenge for any financial institution to survive successfully in this competitive market.

As a MBA student major in supply chain management I tried to explain the green supply chain activities of R.K group department in a simple way.

1.2 Origin of the report

The Ready-Made Garments (RMG) sector is the single largest contributor to Bangladesh's export earnings and plays a pivotal role in employment generation and GDP growth. However, the industry's rapid expansion has also raised concerns over environmental sustainability due to high resource consumption, chemical usage, and waste generation. In recent years, international buyers, regulatory bodies, and environmental advocacy groups have placed increasing pressure on manufacturers to adopt eco-friendly operations and supply chain practices .Against this backdrop, the concept of Green Supply Chain Management (GSCM) has emerged as a strategic

approach to balance economic competitiveness with environmental stewardship. The R.K. Group of Industries, a leading garments manufacturer in Bangladesh, has begun integrating green initiatives into its operations, such as installing energy-efficient machinery, establishing effluent treatment plants, and obtaining environmental certifications. This study originated from the need to critically assess how such initiatives are being implemented in practice, the challenges faced, and the overall impact on operational efficiency and market competitiveness.

1.3 Background of the study

The RMG sector accounts for over 80% of Bangladesh's export revenue and employs millions of workers, making it a cornerstone of the national economy. Despite its economic significance, the sector is often criticized for contributing to water pollution, carbon emissions, and unsafe working conditions. Global market dynamics are shifting towards sustainability, and buyers are increasingly sourcing from suppliers who can demonstrate compliance with environmental and social standards. **Green Supply Chain Management** offers a holistic approach to minimizing environmental impact by integrating sustainable practices into every stage of the supply chain — from raw material sourcing to production, distribution, and end-of-life product management. In Bangladesh, adoption of GSCM is still in its early stages, often driven more by buyer requirements than by proactive corporate strategies. R.K. Group of Industries, established in 1990, has grown into a significant player in the RMG sector with an expanding client base and international market reach. In recent years, the company has initiated several green practices, including renewable resource utilization, waste recycling, and environmental compliance certifications. However, the degree of integration varies across departments, and barriers such as limited financial resources, low worker awareness, and insufficient government support persist. This study seeks to analyze R.K. Group's GSCM practices, evaluate their effectiveness, and identify opportunities for further improvement. By doing so, it aims to contribute to the broader understanding of sustainable supply chain practices in Bangladesh's RMG sector and provide actionable insights for both industry practitioners and policymakers.

1.4 Scope of the study

This report has covered the supply chain management activities of R.K group of industries. Most of the information and data are mainly based on R.K group up to July 2020 has been analyzed in this report.

1.5 Objectives of the study

Broad Objectives

The Broad Objective of the this Study is to Implementation of Green Supply Chain Management on RMG Sector in Bangladesh: A Case Study on R.K Group of Industries Ltd.

Specific Objectives

The main objectives of this study are as follows:

- to understand the supply chain activities of R.K group;
- to know about the organizational supply chain activities;
- to analyze the supply chain activities of R.K group;
- to recommend the R.K group to get rid of the shortcomings;

1.6 Research Methodology

This study is mainly based on the data collected from the original database, website and the annual reports of R.K group. Apart from that, information regarding market condition of garments industry has been collected from relevant journals, newspapers and reports. After the collection of all the relevant information and data, both have been determined through numerical and graphical analysis.

Primary Sources

- Focus Group Discussion (FGD)
- In-depth Interview (IDI)
- Surveys
- Personal Interviews
- Statistical data
- Experiments
- Non-government documents

- Research reports.

Secondary Sources

- Different report of R.K. Group
- Manuals
- Official publications.
- Journal's articles
- Web sites
- Scholarly articles.
- Various reporting data and raw materials of the organization
- Unpublished data received from the organizational.

In this report, Secondary sources of data were annual reports, journals, internet, newspapers, published and unpublished documents of R,K group and the central database of R.K group.

1.7 Limitations of the study

The study was limited to information gathered from supply chain department of R.K group. The officers are very co operative but they are too busy to give me time to get knowledge about practical activities on the way of the study. During my dissertation at R.K group, I have faced the following problem:

- The first obstacle for me, due to time, the scope and dimension of the study has been curtailed. For an analytical purpose adequate time is required. But I got a short time period to prepare the report.
- It was very difficult to collect data. Because the department of supply chain management is not very large but all of the employees are very busy. For the time limitation they could not able to provide adequate data required to furnish my report properly.
- I have some theoretical knowledge but not practical experience.
- The company authorities are so busy that they could not give me sufficient time for discussion.
- Lack of my practical knowledge.
- All employees are not always interested to spend time for me.

Chapter-02
Literature Review

2.1 Concept of Supply Chain Management

Supply Chain Management is a network of facilities that produce raw materials, transform them into intermediate goods and then final products, and deliver the products to customers through a distribution system. It spans procurement, manufacturing and distribution (Lee & Billington 1995) the basic objective of supply chain management is to —optimize performance of the chain to add as much value as possible for the least cost possible. In other words, it aims to link all the supply chain agents to jointly cooperate within the firm as a way to maximize productivity in the supply chain and deliver the most benefits to all related parties (Finch 2006).

Adoption of Supply chain management practices in industries has steadily increased since the 1980s. A number of definitions are proposed and the concept is discussed from many perspectives. However Cousins et al. (2006); Sachan and Datta (2005); Storey et al. (2006) provided excellent review on supply chain management literature. These papers define the concept, principals, nature, and development of SCM and indicate that there is an intense research being conducted around the world in this field they critically assessed developments in the theory and practice of supply management.

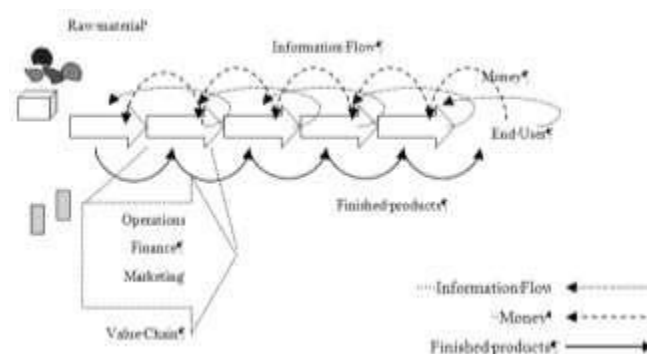
Gunasekaran and McGaughey (2003) extended the scope of SCM beyond material management, partnership, information technology to the Total Quality Management areas like management commitment, organizational structure, training and behavioral issues. As firms' survival lies on integration, a good understanding of the integration process is a key aspect in SCM. Mouritsen et al. (2003) discussed that basic hypothesis —the more integration (wider the scope) – the better the management of the chain" is not always true and proved that it depends very much on the —environment" of the supply chain and the power relations between the participants in the supply chain. Authors proposed a set of management techniques and tools to analyze successful SCM strategies.

It is also observed that research is not limited to hypothesis testing and data analysis, but more advanced techniques like simulation, Artificial Neural Network, and Fuzzy logic are also used for optimization and decision making in SCM. Koh and Tan (2006) used the principles of fuzzy logic for analyzing and monitoring performance of suppliers based on the criteria of product quality and delivery time where as Chiu and Lin (2004) showed how the concepts of collaborative agents and artificial neural networks (ANNs) can work together to enable collaborative supply chain planning (SCP).

It appears from literature review that researchers have studied supply chain management from a system perspective, or the systemic natures of interactions between the participants of supply chain are observed. Although numerous studies views SCM from different perspectives, this paper gives the better understanding of supply chain activities.

2.2 Supply Chain Management:

Supply Chain Management is management of material, money, men, and information within and across the supply chain to maximize customer satisfaction and to get an edge over competitors.



Issues and Challenges

Successful implementation of SCM is seen as closely dependent upon the need for breaking down barriers not only between internal departments and business processes, but also across companies within the whole supply chain (Vollman et al., 1997) . Its success is also associated with the challenging development of a new

culture based on empowerment and on-going and shared learning and continuous improvement. Another challenging and difficult feature of SCM is linked with the emergence of the network organization, which can lead to a complex web of linkages to be coordinated and managed. This can imply difficulties which include lack of common purpose, multiple and hidden goals, power imbalances, culture and procedures, conflict over autonomy and accountability, over-dependence and a continuing lack of openness and opportunistic behaviour (Cox and Townsend, 1998).

2.3 Supply chain management objectives:

The main reason and objective of SCM is to provide a strategic weapon to build up and enhance sustainable competitive advantage by cost reduction without compromising customer satisfaction (Mentzer et al. 2001). Moreover, the ability to understand the environment pressures that drive the SCM and clearly note the barriers and implement solutions or bridges enables supply chain performance to maintain competitive advantage (Fawcett et al, 2008, 37). The main goal and important aspect of SC is leveraging the expertise, experience, skills and capabilities of the SCP who comprise this competitive network (Mentzer et al., 2001).

2.4 Barriers, Bridges and Benefits to effective SCM:

There are a number of hurdles that block the path of firms implementing an integrated SC practices and processes. Fawcett et al. (2008) reviewed recent scientific literature on the potential barriers to SCM. They classified the barriers into two categories namely inter-firm rivalry and managerial complexity. They noted the following barriers under inter-firm rivalry category, in order of significance; internal and external turf wars, poor SCM planning, lack of vision of SCM, lack of trust, executive commitment and poor SCM understanding. All these barriers work against agility in SC and management should reduce their impact. However the worst barrier, internal and external turf wars needs urgent attention by SCPs as its negative impact is fast and severe leading to the disruption of the SC.

Poor planning and lack of vision are symptoms of failure by SCs, though their effects may be slow to appear their eventual impact is disastrous.

Managerial complexity includes misaligned SC processes, structures and major differences in SCPs' business culture (Fawcett et al., 2008). And in the managerial complexity category Fawcett et al. (2008) noted the following barriers in order of significance; IS/IT deficiencies, organizational structure/culture, lack SC measurement and lack of alliance guidelines. These problems are both at enterprise level and SC level and hence the need to tackle them at both fronts. The worst barrier IS/IT deficiencies mean loss in competitive advantage by the whole SC.

Fawcett et al. (2008) reviewed solutions to the SCM barriers proposed in the scientific literature. They noted the following plausible solutions in order of importance; information transparency, CFT/CF collaboration, collaborative planning, IT architecture/internet, formal performance tracking, adopt strategies SCM vision, attention to human factors, supplier certification/reduction, target segmented customers and shared investment/benefits.

Fawcett et al. (2008) reviewed key benefits of SCM proposed in literature and noted the following in the order of their importance; increased inventory turnover, increased revenues, SCM cost reduction, product availability, decreased order cycle time, responsiveness, economic value added, capital utilization, decreased time to market and reducing logistics costs.

2.5 Need for Managing Supply Chain:

The next important issue is why the firms should consciously manage the supply chain. Supply chain involves the cost to convey the information, produce components, store them, transport them, and transfer funds and so on. The total cost of supply chain tends to increase due to many parameters like huge capital cost required for running global businesses, mounting real estate costs and freight charges (Koch, 2006). However the perfect planning in SCM regarding material arrival, production schedule and distribution not only reduces the inventory and inventory cost but also reduces the wasted time and energy (Verma et al., 2006). Supply chain

management drastically alters inventory investment across a range of industries, and helps to tackle economic fluctuations (Heng et al., 2005).

Significance of Performance Evaluation:

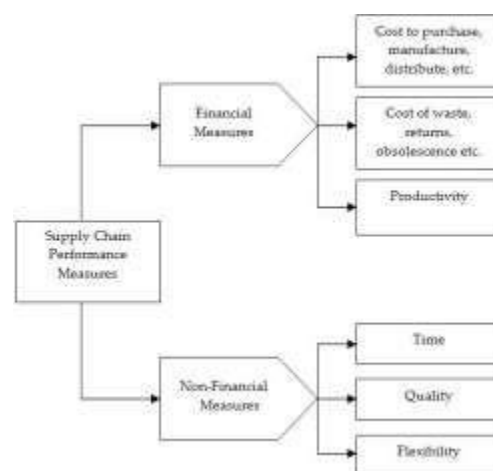
Performance evaluation is very important as a strategic tool and also provides means to achieve the objectives required, fulfilling a firm's mission/strategy statement. As highlighted in the earlier section, major task in performance measurement is to identify, evaluate and select the performance measures, which are appropriate to assess inter-organizational performance. A general tendency in many firms has been to evaluate performance, primarily on the basis of cost and efficiency (Skinner, 1971). This has resulted in most measures focusing on financial data such as return on investment, return on sales, price variances, sales per employee, productivity and profit per unit production etc. The literature reviewed so far highlights the importance of managing the design and development of performance measurement systems to ensure that they continue to reflect the environment and objectives of the organization. The literature also suggests that the factors affecting evolutionary change within organizations, and hence the evolution of performance measures, are many and complex.

Effectively measuring and managing of supply chain performance is a complex and difficult task. If performance measurement is to lead to long-term and continuous performance improvement, then different stages of the performance measurement and management processes such as design of measurement systems, their implementation, and identification of appropriate measures to be used are to be successfully implemented. Organizational support in terms of knowledge sharing, leadership, structure and learning is immensely required for successful implementation.

2.6 Performance measures Classification:

De Toni and Tonchia (2001) conceptually classified the performances of the operations into two broad categories of 'Cost performances' and 'Non - Cost performances', which have further divisions.

Non-financial performances include measures related to time, flexibility and quality. It is an important move towards a multi criteria approach, which can correspond to the need of holistic and strategic approach. Non-monetary units of measures generally measure the non-cost performances and as far as they influence the economic and financial performances (net income and profitability), the link with them cannot be calculated in a precise manner as for the cost performances. Non- cost measures are divided into three categories, namely quality, time and flexibility related measures. Time element has strategic importance in business and hence ‘time’ has to be used as a strategic metric in performance measurement (Stack et al, 1990). These authors argue that measuring, controlling and compressing time shall improve quality, reduce costs, improve responsiveness to customer orders, enhance delivery, increase productivity, increase market share and increase profits.



Flexibility (to measure the ability to deal with the dynamic nature of the business) is a performance apart, since it is an ability to change something (for example, the production volume or mix) in relation to all the three performances of cost, time and quality (De Toni and Tonchia, 1998). Gunasekaran et al. (2001) outlined six sets of performance metrics. The emphasis is also on the importance of measuring the non- financial aspects and the non-quantifiable and intangible aspects of performance. These parameters and metrics include the measures at strategic, operational and tactical level and these metrics are aligned to the four basic links that constitute the supply chain: plan, source, make and deliver. The measure sets incorporate measures for the issues related to supplier’s relations.

Chapter-03

Organizational overview

3.1 History of the R.K group

Bangladesh is a developing small country in South Asia. A lion share of GDP is contributed by readymade garments sector in this country, and "R K group of industries. Is one of the pioneers in garments processing & exporting industry in this sector. From a moderate start at 1990, with few struggling initial years, R K group never look back. R K group is now one of the largest and prosperous garments industries in Bangladesh. Their experience allows them to have the best technology and technique in garments processing as they have installed world's most modern and sophisticated machines in their production floor.

3.2 Vision

- To achieve business excellence by working with world-class buyers for knit garments where quality will be the cornerstone of achievement .

3.3 Mission

- Commitment towards the development of industrial and financial sectors by offering diverse and innovative new products and solutions.
- Continuous drive in improving services tailored to client's need.
- Pursue proactive approach for reaping maximum benefits for all the buyer.
- Attach importance to Human Resource Management and provide job satisfaction for all with equal opportunities for career development.
- Serve for well-being of the society.

3.4 R.K group at a glance

Name	R.K Group of Industries.
Registered Office	Chowdhury bari, Godnail, Siddhirgonj, Narayangonj- 1432, Bangladesh
Authorized Capital	BDT 250 million divided into 20 million shares of TK. 100 each.

Paid up Capital	BDT 150 million
Net Profit (after tax)	BDT 8.9 million per year
Earning Per Share	BDT 0.60 million
Auditor Company	Md. Jahangir Alom Head of the Accounts

Source:<http://www.rkgroup.bd.net>

3.5 Objectives of R.K group

- Continuous diversification for maximization of buyer value.
- Creating synergy through symbiosis of dynamic management and board.
- Serving and sustaining individual and institutional clients having high integrity.
- Focusing intensely on maintaining a sound asset portfolio.
- Finding out diversified sources of fund and exercise good fund management practices.
- Providing flexible and customized service to clients to build a long-term relationship.
- Retaining most dynamic people with good aptitude.
- Achieving a leadership position with distinction in the market.

3.6 Department of R.K group

R.K group has many departments, but mainly two departments which together is the main driver or backbone of the organization. All the products and services are offered through and the help of these departments. Following list provide the name of main two departments is:

- Operational / Business development Department
- Finance & Accounts department.
- Human Resources department
- Corporate Affairs department
- Information Technology department

- Sales & Marketing department
- Internal audit & Compliance department
- Administration department
- Supply Chain department

3.7 Structure of the supply chain management in R.K Group

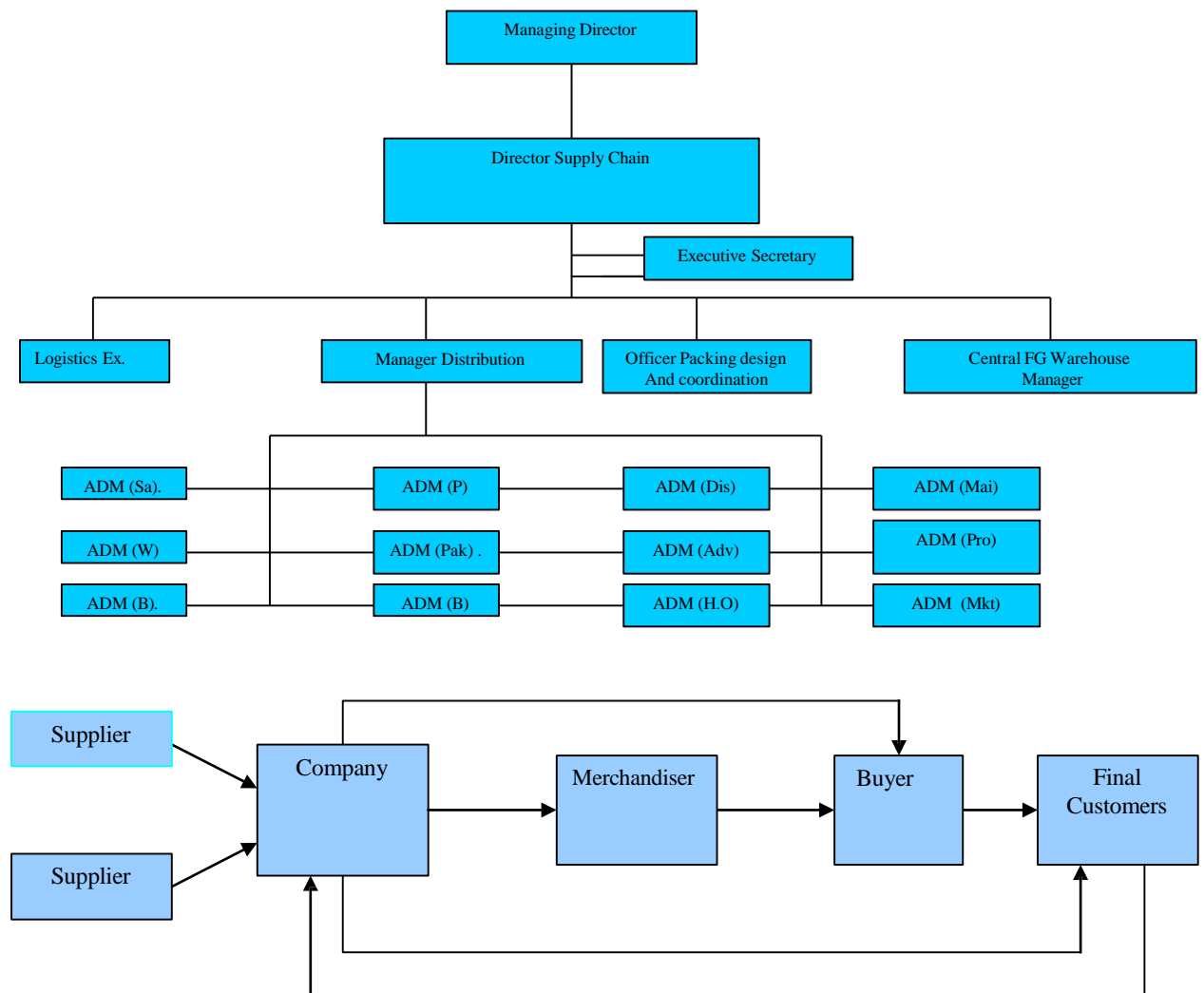


Figure: Structure of supply chain management in R.K group

Source: Memorandum of Association of R.K group

3.8 SWOT analysis of R.K group

The SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of R.K group will give us an overview of the environment in which the Company performs.

The Strengths

- Board of Directors R.K group is sponsored by 3 (three) established company, financial institution and renowned person. They can provide equity support, if necessary as well as the syndicated financing arrangement is much easier for supply chain.
- High Service Quality R.K group always provide its clients with superior services.
- International Market Experience The Chairman, Managing Director and a major portion of the Management Team of supply chain have experience in dealing in the international financial market.
- Innovation in Products R.K group always tries to come up with innovative products for its clients. Work order processing, term buyer, factoring are its innovative products.
- Efficient Operations R.K group operations are carried out efficiently. This allows the Company to reduce cost and hereby offer superior products and lower costs to its clients. It has got license approved by BGMEA as a primary dealer. Capital market operation has been commenced in 2004 by R.K group.

The Weaknesses

- Insufficient Manpower R.K group has not the manpower, as it require. At present, it has not enough clients and the manpower is inadequate. There are only two officers to look over all the clients of the Company that is really a challenging job.
- Business diversification Business diversification of R.K group is comparatively lower than the other market competitors like Knit Concern Group, Anowara Group and Ruposhe Group etc.

The Opportunities

- New Products R.K group always tries to come up with innovative products for its clients. R.K group is in the advanced stage of introducing the Re discounting Facilities for Buyers Acceptances and work order process.
- Expansion Garments business has a good prospect in Bangladesh. Some of the firms of garments industry are going to open their branches in different places in Bangladesh. Therefore, there is a good opportunity for R.K group to expand its business.

The Threats

- Competitions Most of the company in the country produce and selling to their clients.
- Global Economy Downturn This one factor that is out of everyone's control, but nevertheless has huge impacts on each and everyone's business. This takes a negative toll in the investment condition inside the country.
- Financial Market Money market and capital market fluctuate very often. Sometimes garments companies face volatile situation.

Chapter-04

Analysis of Green Supply Chain Management on RMG Sector in Bangladesh

4.1 Key Elements of Supply Chain Management

The supply chain is a longer channel stretching from raw materials to component to finished products carried to final buyer. All parties involve directly or indirectly to fulfilling customer needs that's call the supply chain management. Supply chains play a vital roll for all the reputed national & multi national organization. First to last supply chain makes good relationship between producers to actual customers. All the stages are important that is using for supply chain. The supply chain management is an essential part for any production company. It work proper way to collecting raw materials and distribute products to the final customers. Small or large every organization follows the supply chain activities.

4.2 Mission of Supply Chain

- With a single team and in the frame of the Corporate and Regional Supply Chain organization & Guidelines.
- All Supply Chain Processes
 - Sales Forecasting in units
 - Supply
 - Sales Administration
 - Distribution channel

4.3 Supply Chain drivers in R.K group

- Facilities
- Inventory
- Transportation
- Information
- Sourcing
- Pricing

4.4 Distribution Facilities

- Warehouse : 5
- Distribution centers : 4
- Number of persons involved in distribution : 125
 - Permanent : 50
 - Casual : 75
- Distribution fleet : 10
- Number of shipping point : 1

4.5 Distribution Network in Supply Chain

- Manufacturer storage with direct shipping.
- Distribution storage with carrier delivery.
- Retail storage with customer pickup.

4.6 Obstacles to Coordination in a Supply Chain

- Incentive obstacles.
 - Local optimization within function or stages of a supply chain
 - Sales force incentives
- Information processing obstacle
 - Forecasting based on order or not customer demand.
 - Lack of information sharing.
- Operation obstacles.
 - Order in large lots
 - Large replenishment lead time
 - Rationing and shortage gaming.
- Pricing obstacles.
 - Lot size based quantity discount
 - Price fluctuations
- Behavioral obstacles.

4.7 General activities of Supply Chain Department

Supply chain department of a company bridge up the gap among company, its retailers, wholesalers, suppliers & dealers and different types of party they are active at present. To condense all the corporate activities and put them in a structure, those can be divided into two categories.

- Raw materials collection related activities
- Distribution related activities

Raw materials collection related activities

This department is to work for collecting raw materials. Collecting raw materials is an important part that is involved in first stage. Raw materials is the main component to producing a good product. So the supply chain department mainly works for good raw materials collection.

Distribution related activities

This department is to work for distribute the finished goods to actual consumers. In this department mainly try building a strong relationship in all supply chain parties. How many channels are involved in the supply chain? Sales force increase etc. are involved in this part. Increasing organizations revenue, analyzing demands & needs of customers that's he/she wants, then fulfilling his/her satisfaction.

4.8 Finished goods stock

Definition

Define the Standard rules of Stocks Cover for Finished Goods recommended by the supply chain Direction to be applied in way of ensure the safely of supply chain of Finished Goods into the permanent relationship of Demand Management between the readymade fabrics and the Affiliates Markets and Areas inside the RK Group (these rules are applied in the Service Agreements, between the Markets/ Platforms, the garments sites and the Distribution Centers).

Field of application

The Best practice of Finished Goods Stocks Policy is to all Finished Goods Products required from the Affiliates-Markets to the garment Plants or to the External Production: it could concern products available for sale, intermediates to be repacked locally (platforms, local workshops) and bulk products.

This policy is also applicable for local subcontracting operations (third party's partners monitored by the Affiliates- Markets). Specific constraints issues must be addressed and mutually agreed upon. In addition, these rules of Stocks have to be applied to internal orders of bulk products, supplied from others.

This Best Practice is closely linked with the Best Practice —Customer Service Charter^{ll} which defines the rules and logistic parameters in use into service agreements.

General Rules of Finished Goods Stock Cover

The Finished Goods Stocks Policy is to apply to the whole stages of the product life cycle taking account of the specific features of each stage and of each product:

- Launch (stock of primary implementation)
- Growth (stock of growth support)
- Decline (modulated stock)
- Withdrawal (stock, projected to exhaustion)

Stock Policy

In case of a commercial launch in the market of a new formula or a new idea, we recommended the implementation of a minimum stock representing, at least 3 months of sales forecasts (to be defined in advance between the market and the plant) available previously to the first step of launch until the time when the reliability of rolling forecasts will be under full control.

Depends on specific situation, this standard target could be adapted under the responsibility of the Market Supply Chain Manager.

Standard rules of finished products stocks cover

The detailed definition of the stocks cover target is made in respect of BP 1-02 —Consumer Service Charter¹ and of its operating process, through a double approach:

A first quantitative definition, related to the ABC Class for each SKU (both for market and for plant):

Calculation in decreasing value (production= budgeted volumes of packs; market= budget volumes × sales price)-Standard splitting of 3 classes (A=80%, B=15%, C=5%)

Second qualitative stage of adjustment, taking into account the individual features of each SKU (constrains or abilities).

This double approach for the determination of Stocks Targets/ ABC Class is common to all SKU's, which mode (RAG/ VMI or BAD / MTO) it may be.

The minimum stock parameter has to cover:

- The lead time, required for the next delivery, scheduled with the define rule.
- The sum of risks of the entire supply chain process (possible delays at the plant + possible transit delays + possible cover sales from the last estimated monthly forecast).

So the minimum stock target for each SKU could increase proportionally to the sum of risks and constrains coming both from market and plant.

Market And Production Constrains

MARKETS CONSTRAINS	PRODUCTION CONSTRAINS
<ul style="list-style-type: none"> • Hazardous Demand • Strategic Products / Turnover to secure. • Products in launch or in strong growth • Promotional products • Life saving Products • Products with seasonal variations • Psychotropic or narcotic products / import and Export Licenses 	<ul style="list-style-type: none"> • Products with non robust quality process • Hazardous Laboratory Results • Specific Policy • Under capacities of resources • Production campaigns with low frequency • Production batches sizes.

Source: Memorandum of Association of R.K group

A punctual protection stock could be added to the permanent minimum stock in case of punctual identified constrains coming from:

- The plant (work centers stop, maintaining, holidays)
- The distribution (anticipated action on haulage strike, customs trouble)
- The market (sales forcing, punctual weakness of a competitor, anticipated closing of local platform)

At the opposite, the minimum stock target could be decreased in case of abilities from the market and the plant, or still of specific risks (shelf life, storage)

Market And Production Abilities or Risks

MARKETS ABILITIES OR RISKS	PRODUCTION ABILITIES
very regular Demand	Regular Production in routine
Products in decline	Products with robust quality
Products no more promoted	process
Products with low shelf life(<24 months)	Over capacity of resources
Tropical Climatic Conditions (temperature $\geq 30^\circ$, humidity $\geq 90\%$).	Flexibility.

Source: Memorandum of Association of R.K group

The maximum stock is calculated in adding:

- The minimum stock previously defined
- The reorder quantity (production replenishment quantity) increased of an authorized variation for monitoring adjustment (+15% maximum).

Reorder Quantity

The reorder quantity is proposed by the plant in respect to manufacturing batch size constraints.

Following the families of products- processes, the reorder quantity is the result of:

- Batch size of intermediates manufacturing (bulk) depending on frequency of campaigns (with very low frequency of manufacturing).
- Batch size of packaging constraints for optimizing the change over time of packaging lines.

The frequency of reorder is the direct result of the division of the annual quantity by the reorder quantity.

Optimized practice of stocks targeting

- Focusing the management effort priority on category a products which are strategic, sensitive and major in commercial, financial and industrial terms.
- Paying careful attention to the initial stock constitution for the launchings of new products and to the transitory stock management in case of modification or changes (packaging) or inters sites transfer.
- Minimizing the reordering rate of B and C products in order to simplify their management (cost of transportation, productivity, global management).

RAG/VMI products Stocks Cover Target (on hand, available to sale)

The RAG/VMI Products (in French: Re Approvisionnement Guaranty ;in English VMI: Vendor Management Inventory) are managed by pulled flows from the rolling forecasts, through the monitoring of the local stock, inside of the interval previously established of a minimum stock cover and a maximum stock level.

This mode management is to be products with daily sales or weekly, at the maximum, usual and repetitive (market economy= continuous demand) managed and provided by monthly forecasts.

This mode of management requires from the markets the following conditions:

- Be connected to M2(logistic tool of RK group interface between Markets and Plants)
- Enter and update regular monthly forecasts upon a rolling horizon of 14 months.
- Have a day to day regular sales or weekly at the maximum(operating process called mode PI)

This mode of management requires from the Plants to respect the minimum and maximum stocks targets, in accordance with the service agreements.

The mandatory parameters for the RAG/VMI products in M2 to be updated in respect of the rules proposed by the Supply Chain Direction are as follows:

- The minimum stock cover (in working days: 20 days= 1 month)

- The maximum stock cover (in working days: 60 days = 3 months)
- The transit lead time (defined by the Distribution in calendar days: 10 days:1.5 week)

A minimum of once a year charters revisiting is absolutely mandatory (and for every change).

RAG/VMI Products Stocks Cover Targets

Products RAG/ VMI Monthly forecasts for —Europe- Germany-France Markets (and local domestic products for —Intercontinental- USA- Japan):

Global Average Stock Cover = 2 months (limits: 1.7 to 2.3 months)

➤ Stocks Cover Targets

ABC Class	Frequency of reorder	Minimum Stock	Average Stock	Maximum Stock
A (80%)	Minimum of 12 times a year	1 month	1.5 month	2 months
B (15%)	3-4-6 times a year	2 months	3 months	4 months
C (5%)	1-2 times a year	3 months	6 months	12 months

Source: Memorandum of Association of R.K group

4.9 Products RAG/ VMI Monthly forecasts for “Intercontinental - USA- Japan” (for imported products)

Global Average Stock Cover = 2 months (limits: 1.7 to 2.3 months)

➤ Average Stock Cover

ABC Class	Frequency of reorder	Minimum Stock	Average Stock	Maximum Stock
A (80%)	Minimum of 12 times a year	2 month	2.5 month	3 months
B (15%)	3-4-6 times a year	3 months	4 months	5 months
C (5%)	1-2 times a year	4 months	6 months	12 months

Source: Memorandum of Association of R.K group

An additional stocks coverage (from plus 2 weeks to some months, over the standard targets) can be required , if needs be, under the responsibility of the — Products Supply Chain Leaders| for some Products/ Markets representing a specific strategic interest for the company, through these rules:

Minimum Stock	Average Stock
From 1.5 month to X months	From 2 months to Y months

The BAD/ MTO products (in French: Busoni a date; in English, Make to orders) are managed by pulled flows from the Affiliates- Markets, which send orders to plants in respect of pre defined supply rules for replenishing a local stock, which corresponds to the realities and constrains of each market.

This mode of management is to be applied: Primarily for products with punctual operations (more often irregular) of sales in the market, by discontinuous and hazardous demand (supply economy= discontinuous demand) for markets non connected to M2.

For the punctual demand of some products not driven by monthly rolling forecasts (samples, bulk) from connected markets. To supply of the demand of Third Party Customers (Co – marketers).

This mode of management requires from the Affiliates the following conditions.

Respects the minimum and maximum targets of the Stocks Policy and the minimum supply lead time (frozen lead time of the plant + transit time). Enter and update regular requirements upon a 14 months mobile horizon.

This mode of management requires from the plants to respect their commitment of frozen lead time (and so, of availability date ex works).

4.10 Compulsory parameters to be updated into the Service

Agreements

The compulsory parameters for the BAD /MTO products to be updated in M2 in respect of the rules proposed by the Logistics Direction are as follows:

The frozen lead time, defined by each plants for each product (expressed in number of month: standard = 3 months)

The transit lead time (defined by the Distribution in calendar days: 10 days: 1.5 week). A minimum of once a year charters revisiting is absolutely mandatory (and for every change)

Products RAG/ VMI Monthly forecasts for —Europe- Germany-France|| Markets (and local domestic products for —Intercontinental- USA- Japan||):

4.11 Customers Service Charter

The target of this Best Practice is to define the relationship of Customer Service, between the Affiliates-Markets- Platforms, the readymade garments and the Distribution / Transit Centers in term of:

Spirit and commitment of good will, transparency and collaborative approach for a common purpose: to optimize the Customer Service.

Clarify the logistic rules and processing through the information systems (definition of logistic rules and parameters, implementation process of service agreements).

This Best Practice of Finished Goods Stocks Policy is to apply to all Finished Goods Products required from the Affiliates-Markets-Platforms to the garments Plant and shipped by Distribution / Transit Centers it could concern products available for sale, intermediates to be repacked locally (platforms, local workshops.. and bulk products(tablets or pellets in outer-cases for local packaging operations...).

In case of local subcontracting operations (third party's partners monitored by the Affiliates-Markets) or external garments production, these rules will be applied with the suppliers and subcontractors in same way with translating, if necessary, possible specific constraints.

In addition, these rules of Stocks have to be applied to internal orders of hulk products.

Note: This Best Practice is closely linked with the Best Practice 1-01 "Finished Goods Stocks Policy".

The approach of Customer Service Charter Approach relies on two major actions:

The full commitment of actors to this Charter and to the optimized use of information systems (SAP, M2, Manugistics, CIM.).

The definition of processing with implementation of adapted rules and compulsory parameters for each SKU, to be established after a global agreement of the Affiliates-Markets, the garments Plant and the Distribution / Transit Centers.

The commitment to this charter involves the acceptance of behavior for transparency of information and collaboration in a common purpose : the best Customer Service is our absolute priority, through the following objectives :

- No stock outs
- No delay of orders deliveries
- All major trouble of supply involves a complete collaboration

This Customer Service Charter means for all:

- The respect of the Spirit of the Charter (commitment of good will, transparency of information, collaborative attitude and best practices application for the optimized Customer Service).
- The definition of major standard terms in use.
- The commitment of connected Markets.
- The commitment of no connected Markets.
- The commitment of Producers.
- The commitment of Distribution / Transit Centers (Export Transit).

This Charter is to be read and approved, for meaning the agreement from each Affiliates-Markets Supply Chain Manager, Plants Supply Chain Manager and Distribution / Transit Centers Manager.

4.12 Implementation of logistic rules and parameters

Into the general functionalities of Demand Management, integrated in the information system SAP M2 and interfaced to the Manufacturing systems (SAP, P2, SIP,..), these standard rules (from the orders requirements of the Affiliates-Markets to the answer of delivery by the readymade garments) are organized with the two modes of management RAG / VMI and BAD / MTO, depending on the type of the Demand, as follows.

For making easier the negotiated Supply Chain rules and parameters, a dedicated operating process has been developed to the attention of actors of Affiliates-Markets-

Platforms, of Plants and of Distribution .

The RAG / VMI Products (in French :« Re Approvisionnement Guaranty »; in English, VMI : « Vendor Management Inventory ») are managed- by pulled flows from the rolling forecasts, through the monitoring of the local stock , inside of the interval previously established of a minimum stock cover and a maximum stock level.

This mode of management is to be applied to products with daily sales or weekly, at the maximum, usual and repetitive (market economy = continuous demand) managed and provided by monthly forecasts.

This mode of management requires from the Affiliates-Markets the following conditions:

- Be connected to M2 (logistic tool of interface between Markets and Plants of RK Group).
- Enter and update regular monthly forecasts upon a rolling horizon of 14 months.
- Have a day to day regular sales or weekly at the maximum (operating process called mode PI).

This mode of management requires from the Plants to:

Monitor the supply in respect of the objectives of minimum and maximum stocks cover.

a) The mandatory parameters for the RAG / VMI products in M2 to be updated in respect of the rules proposed by the Supply Chain Direction are as follows:

- The minimum stock cover (in working days: 20 days = 1 month)
- The maximum stock cover (in working days: 60 days = 3 months)
- The transit lead time (defined by the Distribution in calendar days: 10 days = 1.5 week).

b) The definition of parameters of minimum stock and maximum stock is under the responsibility of Plants; nevertheless, this definition has to be proposed to the Affiliates-Markets agreement before implementation.

c) For information, it is required to complete for each product:

- The Class of the product in ABC Class of the Plant (internal class, coming from the production constraints of each site).
- The Class of the product in ABC Class of the Affiliate - Market (internal class coming from the priorities of each market).

4.13 Key Performance Indicators

Define the key performance Indicators, as significant of our customer service, supply chain performance and Flows Management, through our processes and clarify rules and responsibilities of actors for these indicators.

Purpose

The purpose is to define the key performance indicators, as significant of our customer's service, supply chain performance and flows management, through our processes and clarify rules and responsibilities for these indicators.

Scope

Through its Logistic Indicators, this Best Practice applies to the entire Supply Chain from garments and External Production Sites, via the Distribution / Transit Centers to Subsidiaries and Markets (and third party customers) within the R.K Group.

This Best Practice does not affect the following Quality Indicators from the Industrial Affairs Quality Division:

This Best Practice is based on the supply chain management rules defined in the following BPs.

- BP 1-01 —Finished Products Stock Policy
- BP 1-02 —Customer Service Charter
- BP 4-01 —Sales Forecasts
- BP 5-01 —SC Steering of Flows of Customer Demand-Manufacturing-Supply",

Chapter-05

Findings

5.1 Findings

This section presents the key findings derived from interviews, document analysis, and observational data regarding the implementation of Green Supply Chain Management (GSCM) in R.K. Group Industries Ltd., a prominent player in Bangladesh's Ready-Made Garments (RMG) sector.

- R.K. Group has partially integrated GSCM across its operations, focusing primarily on green manufacturing and waste management.
- Energy-efficient machinery, LED lighting, and rainwater harvesting systems have been implemented in newer production units.
- The group has obtained OEKO-TEX and ISO 14001 certifications, indicating efforts toward environmental compliance.
- Procurement policies have begun to prioritize organic cotton and low-impact dyes, although this practice is not yet uniformly applied across all production units.
- Suppliers are occasionally audited for compliance, but supply chain traceability remains limited.
- The company has installed an Effluent Treatment Plant (ETP) that complies with DOE guidelines.
- Fabric scraps and by-products are partially reused or sold to local recyclers.
- However, solid waste segregation is inconsistent, and data on waste volumes is not fully digitized or publicly reported.
- Training on sustainability practices is limited to mid-level managers and compliance officers.
- Workers have low awareness of green initiatives, indicating a lack of internal communication and motivation programs.

Chapter-06

Recommendations & Conclusion

6.1 Recommendations

R.K Group of Industries is a well established company in Bangladesh. It has provided the maximum services to the customer than other organization but it has some limitations. I would like to recommend as below:

- **Decision Making:** Decision making power should be decentralized so that effectively and promptly the employees of R.K group can make decision.
- **Number of Experienced Employees:** A handsome number of experienced personnel may be appointed for maintaining the normal flow of work.
- **Record Keeping System:** Filing and record keeping system of R.K group should be modernized.
- **Development of Manpower:** Effective implementation of IT policy depends on higher educated, trained and skilled personnel, software & hardware and networking etc. R.K group should procure and develop such types of employees for IT department.
- **Modernization of training department:** Training department should be modernized with better quality trainer.
- **Motivation of the Employees:** The Company should motive the employee to perform their activity effectively and efficiently and should need to take more initiative to bridge coordination with the employers.
- **More facility to intern student:** Some program like job fair should include different session for intern student. Company should give more facilities like weakly orientation; make up course etc to the dissertation student. The company's Overall process should be more flexible and easy. So that intern can't get bored to fulfill all the terms & conditions.

6.2 Conclusion

R.K group has started operation from 1990 and established itself as one of the Garments company of Bangladesh. The company is led by a Board of directors and has a secure shareholding structure, majority owned by institutional investors and general public. R.K group has touched several milestones such as getting membership of BGMEA, acquiring partnership of BSCIC etc. R.K group is serving its clients by different products such as baby items, adult's item, women items etc.

Corporate activities of an institution include both the routine work and assigned activities. These activities ensure the operational and functional circulation so that institution can survive in the battle of existence. Competitive market needs quick response to make deals and maintain clients through corporate activities when share department plays an important role to link among shareholders, management, directors and regulatory bodies.

Overall analysis on the R.K group and its recovery management shows how the company is stepping towards a real 21st century's modern organization and its extraordinary efforts in Bangladesh.

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