



Dekko ReadyWears Ltd.

Internship Report on “Industrial Engineering Department of Dekko ReadyWears Ltd”



Submitted to

ISLAMIC UNIVERSITY OF TECHNOLOGY

In partial fulfillment of the requirements for the degree of
BBA in Business and Technology Management (BTM)

Submitted by:

I understand that my final report will become part of my permanent collection of the Islamic University of Technology BBA in Business and Technology Management Program. My signature below authorizes release of my final report to any reader upon request.

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A handwritten signature in black ink, appearing to read "Farjana Nasrin", with the date "11.05.22" written below it.

Approved by:

Farjana Nasrin

Lecturer

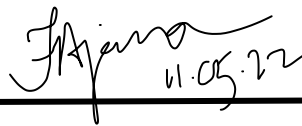
Department of Business & Technology Management (BTM),

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Date of Submission: 22 April, 2022

Letter of Endorsement

The Internship Report entitled “Industrial Engineering department of RMG sector” has been submitted to the Department of Business & Technology Management (BTM), Islamic University of Technology (IUT), OIC, in partial fulfillment of the requirements for the degree of Business & Technology Management (BTM), by Kamrun Naher (ID: 170061076). The report has been accepted and may be presented to the Internship Defense Committee for evaluation. (Any opinions, suggestions made in this report are entirely that of the author of the report. The University does not condone nor reject any of these opinions or suggestions).



Farjana Nasrin

Internship Supervisor

Letter of Transmittal

Date: 22 April 2022

Farjana Nasrin,

Lecturer

Department of Business & Technology Management (BTM),

Islamic University of Technology (IUT), OIC,

Dhaka, Bangladesh.

Subject: Submission of Internship Report on “Industrial Engineering department of RMG sector”

Dear Mam,

With Due respect, I would like to inform you that it gives me pleasure to submit my internship report after working for 3 months at Dekko ReadyWears Ltd as an intern. During this tenure, I have worked in Industrial Engineering department of DRI. This report has been valuable as it reflects my practical experiences and learnings of Industrial Engineering activities on RMG sector. It is a great pleasure for me to present you this report focused on “Industrial Engineering department of RMG sector.” Throughout the study, I have tried with the best of my capacity to accommodate as much information and relevant issues as possible and tried to follow the instructions as you have suggested. I tried my best to make this report as informative as possible. Here, I have gained real-life insights into ready-made garments sector, it’s production process and how IE activities help to reduce cost and gain profit of the organization. It is my pleasure to state that I am very grateful to you for your constant guideline, support, and direction whenever needed for accomplishing my report. I have invested my best effort and put dedication to come up with a report that can add value to my internship experience.

Sincerely yours,

Kamrun Naher

ID: 170061076

Department of Business & Technology Management (BTM),

Islamic University of Technology (IUT), OIC

Acknowledgment

First and foremost, I would like to express my gratitude to Allah for granting me the strength and capacity to complete my internship program. This internship report is organized as part of my undergraduate program at the Islamic University of Technology.

Furthermore, I am overwhelmed to acknowledge my gratitude to my supervisor, Farjana Nasrin, for guiding me through this internship. She gave me great guidance and assisted me during difficult times. Her enthusiasm and assistance were significant to the program's success.

Also, I would like to thank my corporate supervisor, Toriqul Islam Naim, for his constant professional and personal support and advice and for making this difficult time pleasurable while still being productive and answering any of my queries.

In all humility and heartfelt gratitude to the following people who assisted and encouraged me to intern on this wonderful field "Industrial Engineering", which allowed me to conduct extensive studies and learn a lot of new things.

Finally, I'd want to express my heartfelt appreciation to my parents for their consistent support and encouragement during my years of education, particularly for their desertion during this pandemic, which drove me to study properly.

Executive Summary

The following report is a recap of my three-month internship at Dekko ReadyWears Ltd. This internship program has given me valuable insight into ready-made garments production system, specially how Industrial Engineering activities help to reduce the cost in production and maintain a high quality production procedure.

DRL is a factory under Dekko Isho Group established on 2006 and since then it is trying to provide high quality products to the market. According to the surveys, RMG sector is one of the most important sectors of Bangladesh's economy. Dekko Isho group has established itself as a trusted name for clients in an ever-growing business. According to the present circumstances, customers all over the world demand more affordable quality products within their budget. By focusing on customer comfort and entertainment, as well as the proper combination of price with their creative, elegant, and best quality products, which are comparatively less expensive than competitors. Dekko ishoh Group has successfully positioned itself as a customer-friendly and environmentally conscious company to the international buyers of Bangladesh's ready-made garment's export market.

This means that Dekko Isho Group not only ensures high-quality product delivery, but it also try to maintain a good relationship with it's client from all over the world. In 2022, Bangladesh is also trying to improve it's garments sector and making more export of RMG products. It means that if all the RMG manufacturer factory don't maintain high quality production and can't provide high quality products then it will lose it's clients to others competitor like India, China, Vietnam. Because there are so many underdeveloped and developed countries who are trying to make their RMG sector strong by using various modern technologies and methods. DRL tries to maintain a good environment on it's work place and produce high quality products. As a result, Dekko Isho group as well as DRL has received many various national and international certification (mentioned in the Analysis section).

So, in this internship report, based on my educational credentials and work experience obtained from DRL over the previous three months, I evaluate DRK's history, as well as try to understand the whole activities of ready -made garments, various hazards, and what efforts DRL's has undertaken to tackle these challenges.

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**Internship Report on
“Industrial Engineering Department of
Dekko ReadyWears Ltd”**



Chapter 1

Introduction

Internships are compulsory for every business and technology management students to obtain their bachelor's degree since they provide first-hand experience with real-world issues. As a result, it assists students in gaining experience in real-world job circumstances. Because the Business and Technology Management program combines business and technological studies, theoretical knowledge alone is insufficient for working in the field without gaining practical experience on the job. The internship program's main aim is to establish us to an organizational setting in order for us to grow as professionals with real-world experience and to reconcile our academic knowledge with real-world issues. Practical experience as well as theoretical knowledge are required. It can also be used as a warm-up for the working environment that one will encounter later in one's career.

Bangladesh's readymade garment exports have outperformed even the most optimistic expectations over the last two decades. The country's garment export industry is now a multibillion-dollar manufacturing and export business. Globally, one of the most significant social and economic trends in contemporary Bangladesh is the influence of readymade garment exports. Bangladesh's apparel export business has had far-reaching repercussions on the country's society and economy, with around 1.5 million women employed in semi-skilled and skilled roles making clothing for export.

Dekko ReadyWears Ltd offered me a three-month internship, which I took advantage of. Dekko Readywears Ltd, a subsidiary of the Dekko Isho Group, is a 100% export-oriented clothing company. The factory, which opened in 2006, focuses on woven products (men's shirts, women's tops, and children's shirts and tops). This report summarizes the knowledge gained during my three-month required internship in Dekko ReadyWears Ltd's Industrial Engineering department (IE).

The department of industrial engineering (IE) focuses on reducing waste of time, money, materials, machine time, energy, man-hours, and other resources. Industrial engineering is increasingly widely used in the textile and garment sectors, just as it is in other manufacturing industries. A

range of difficulties, including global competitiveness, increased manufacturing prices, lower productivity and efficiency, and worker turnover, are posing substantial challenges to the textile and clothing industries. To address these issues, the textile manufacturing industry applies industrial engineering expertise and formulas.

I had the chance to learn about the apparel sector over the course of the three-month internship, as I had no prior knowledge of clothes or the production process. During this time, I obtained a solid understanding of the production process and learned how IE executives may contribute to the manufacturing operation in order to maximize productivity, save costs, and profit the company. As an IE department intern, I sought to describe my learning and duties.

1.1 Background of the Report

Dekko ReadyWears Ltd is established on 2006 by Dekko Isho Group. Dekko Isho Group has their branches in all most every part of the business like garments, paints, restaurant, fashion retail store, fin-tech, green-tech, cyber security etc. Dekko ReadyWears Ltd is the part of its garments sector business. DRI is a garments factory. Their main product is woven garments. They produce various types of products like men's shirt, men's formal shirt, women denim shirt, girl's denim tops etc. DRI dominated the Bangladesh export market in Europe and America. DRI is partner with various famous brands of Europe continent.

1.3 Origin of the Report

The internship program at the Islamic University of Technology is a requirement for students pursuing a bachelor's degree in Business and Technology Management. This report is required for the Internship program in the same department. This program's principal purpose is to introduce the first batch of BTM department graduates to the labor market and business sector. The purpose of the curriculum is to introduce students to the working world. Because the students are already familiar with business theory, the internship program was created to allow them to apply that theory to the realities of the business world and obtain practical experience. Applying theoretical knowledge to real-world concepts and experiences is the actual challenge here.

1.4 Main Purpose of the Report

The following are the internship's objectives:

- To familiarize us with the working world and to augment our university-based knowledge and talents
- Observe the work of several departments and the sequences in which they work. to instill in kids the values of honesty, accountability, and self-assurance
- To develop a full awareness of job descriptions and responsibilities, to increase our ability for innovation, and to share ideas by being familiar with a garment's management and production procedures.
- To get an awareness of suitable corporate procedures in the industrial sector and to develop effective communication skills with a group of employees
- Must adopt and follow industry-specific safety regulations

This report is the result of three months internship program at DRI's Industrial Engineering Department and it was prepared as per the guideline of the University's requirements for the Business and Technology Management Department.

1.5 Generic Objectives

The major purpose of my three-month internship was to obtain an understanding of the activities of the Industrial Engineering Department in the garment manufacturing process. As a result, I learn about the entire clothing manufacturing process. This report details the activities I participated in throughout my internship. The internship's goal is to demonstrate my understanding of the completed task as well as the experience I received during the program.

1.6 Specific Objectives

- Outline my duties and responsibilities as an intern
- To depict the company's overall condition and status in both domestic and international markets and get a understanding of the country's biggest export sector garments industry.

- Obtaining information about the overall processes of the garments industry and the role of Industrial departments in the garments production process.

1.7 Methodology

I gathered information and insights from both primary and secondary sources while preparing this report.

Primary Resources:

A large portion of this report is devoted to the describing the data gathered by primary researches. The majority of the major components and insights reported were collected during my internship running tie most of the information are gathered form my learning and observtions.

Information Sources:

HR office of the company

The notes that I maintained throughout my internship period.

Secondary sources:

Many information of this report were collected through secondary sources.

Main Sources:

- Company website
- Google Search Engine
- Many article related to garments sector

Scope of the Research:

This paper gives a comprehensive description of Dekko ReadyWears Ltd, its Industrial Engineering Department, and the industry in which it operates. It is largely concerned with the employee's point of view. This article informs readers on the ready-made clothes manufacturing process and the role of IE in the clothing sector..

Limitations: The scope of garment manufacturing and industrial activity is vast. It is impossible for me to gain all of my expertise in the time allotted for my internship. Despite these constraints, I have done my best to complete my three-month course.

Chapter 2

Description of the Company

2.1 Company Name and Overview

The Dekko Isho Group began in 1953 with a revolutionary idea from three aspiring entrepreneurs who invest in the paint industry by creating Roxy Paints Ltd, Bangladesh's first color-producing factory. In 1983, they expanded their manufacturing operations into the garment industry. They are presently involved in the food and technology industries as of 2022. Dekko ISHO Group is dedicated to leadership excellence. Due to the high quality of its products and services, the company has developed at a rapid pace in the garment industry, finally becoming the market leader. Its main priorities are cost leadership and human capital efficiency. As a result, we've become a one-of-a-kind garment company with strategic investments in furniture, restaurants, biodegradable packaging, and technology.

2.2 Mission

The company always try to stay on their on stated mission which are

- Supply with “Zero Defect”,
- Complete customer satisfaction,
- On time delivery,
- Safe environment.

2.3 Vision

Dekko Isho Group stated that “We are committed to total customer satisfaction through our quality product and services achieved with customer focus, involvement of our employees and continual improvement in all areas”

2.4 General Information about Dekko Isho Group

Dekko Isho Group is the parent company of my internship site of Dekko ReadyWears Ltd. Dekkho Isho Group operates in many areas of business in Bangladesh.

Table 1:basic information about Dekko Isho Group

Basic Information of Dekko Isho Group	
Name of Company	DEKKO ISHO GROUP
Corporate Office	Dekkoisho, Suvastu Zenim Plaza, House-37, Road-16 (old-27), Dhanmondi R/A, Dhaka-1209 Tel: +88-02-8057513,9004712 Fax: +88-02-8125083 E-mail: dg@dekkoisho.com Web: www.dekkoisho.com
Year of establishment	1953
Type of Ownership	Group Of Company (100% own)
Contact person	M. Shahid Hossain Chairman Contact: +88-02-9004723 E-Mail: chairman@dekkoisho.com
Operating Areas	Paints
	Apparel
	Apparel Washing
	Furniture
	Restaurant
	Fashion Retail
	Green tech
	Fin Tech
	Agro Tech
	Cyber Security
Name of Sister Concern	Roxy Paints Ltd
	Dekko Readywears Ltd
	Dekko Apparels Ltd
	Globus Garments Ltd
	Dekko Fashions Ltd
	Agami Fashions Ltd
	Agami Washing Ltd
	Dekko Garments ltd
	Klubhaus
	Eco Via Ltd
	AamarPay
	DITECH- Dekko Isho Technologies
Fashol Dotcom Ltd	

2.5 General Information about Dekko ReadyWears Ltd

Dekko ReadyWears Ltd is a factory under Dekko Isho Group established on 2006, which was my internship site. Below I have listed basic information about my internship site Dekko Readywears Ltd.

Table 2: basic information about Dekko ReadyWears Ltd

Basic Information of Dekko ReadyWears Ltd	
Name of Factory	Dekko ReadyWears Ltd.
Factory Address	Plot-M/1, Road-7, Section-7, Mirpur-1216, Dhaka, Bangladesh. Tel: +88-02-9004724,8057513 Fax: +88-02-9132853 E-mail: compliance@dekkoisho.com
Head Office Address	Dekkoisho, Suvastu Zenim Plaza, House-37, Road-16 (old-27),Dhanmondi R/A, Dhaka-1209 Tel: +88-02-8057513,9004712 Fax: +88-02-8125083 E-mail: dg@dekkoisho.com Web: www.dekkoisho.com
Years of Establishment	2006
Type of Ownership	Group of Company (100% own)
Contact Person/s	M. Shahid Hossain Chairman Contact: +88-02-9004723 E-Mail: chairman@dekkoisho.com
	Khurshid Alam GM- HR, Admin & Compliance, Cell: +88-01841296483, E-Mail: khurshid@dekkoisho.com
	Mr. Nur-E-Alam Siddquee AGM-Merchandiser Cell: +88-01841296372 E-mail: siddquee@dekkoisho.com
	Moshiur Rahman AGM-Commercial Cell: +88-01817296328 E-mail: moshiur@dekkoisho.com

Production Concern	Md.Hafizur Rahman Head of Production Cell:+88-01841296741 E-mail:hafiz.drl@dekkoisho.com
	Md.Anisuzzaman AGM-Quality Cell: +88-01841296323 E-mail:anisuzzaman.drl@dekkoisho.com
	Rajib Mohazan DGM-Warehouse Cell: +88-01841296751 E-mail:rajib.drl@dekkoisho.com
Legal Concern	Mohamed Selim Miah AGM-HR & Compliance Cell: +880-1817299755 E-mail: selim.dal@dekkoisho.com
Products Type	Woven (Tops)
Monthly Production Capacity	6,00,000 pcs (24000 pcs/day)
Peak Time	Round the year
Total Sewing Line	25 (With SMS line)
Total Sewing Machine	1535
Total Factory Area (sqft)	2,72,005 (sqft)
Main market	Europe
TIN	141-201-2678/sa-228(Companies)
IBAN No. (VAT/BIN No.)	17011019440
Terms of Payment	L/C
Currency	USD
Number of Building & Utility	Building= 01, Utility=01

Floor Description	<p>9 th Floor: Office Room, Design & Development Room, Conference Room,Gym Room, Display Room.</p> <p>8th Floor: Worker's Dinning, Canteen, Maintance room, Idle Machine Room, Male & Female Rest Room, Leftover Room. 7th Floor: Cutting , SMS Line & Workers Training Center.</p> <p>6th Floor: Sewing Section (1-8 Line)</p> <p>5th Floor: Finishing Section</p> <p>4th Floor: Sewing Section (9-16 Line)</p> <p>3rd Floor: Sample Section , CAD Section & Button Section.</p> <p>2nd Floor: Sewing Section (17-24 Line)</p> <p>1st Floor: Packing Section, Finished Goods Area & Inspection Room.</p> <p>Ground Floor: Doctors Room, Child Care Room, Fair shop, Fabric Store, Fabrics Inspection Room, Office Room, Compressor Room, Genarator Room & Boiler Room.</p> <p>Basement : Car Parking, Accssories Store,Fire Pump Room, wastageArea.</p>
Legal Status	Private Limited Company
Certified by	BSCI, GOTS, OCS, WRAP
Total Employees	3577 (Male 40% and Female 60%)
Working Time	08:00am to 05:00pm (Including 01-hour lunch break) and 02 hours over time
Number of Shift	01 Shift
Weekly of Day	Friday
Minimum Salary	8000/- (BDT.)
Highest Salary of Operator	10737/- (BDT.)
Attendance Bonus	300/- (BDT.)
Registration Number (License No.)	BGMEA Registration No: 4190 Factory License No:12792/Dhaka Trade License No:02-44584 Fire License No:DD/DHAKA/19177/2006
Dining Capacity	1350 persons

2.6 Products

The main product of DRL is woven garments. DRL mainly produces men's wears but they are also capable of producing other types of products like products for women and childrens. But they mainly specialized in mens garments. Below there is a list of products produces by DRL.












Table 3: products of DRI

Name	Picture
Men's Casual Shirts	
Men's Denim Shirts	
Men's Formal Shirts	
Men's Over Shirt	
Women's Denim	
Girl's Top	

2.7 Buyer Information

The main market of DRL's product is across the Europe and America. They deal with many famous brands of Europe and America but among them they deal with some

Table 4: buyer information of DRL

Name	Origin	Logo
BestSeller	Denmark	
KIABI	France	
Esprit	Germany	
Lindex	Sweden	
Celio	France	
MQ	Sweden	
Edward	UK	
s.Oliver	Germany	
Tom Tailor	Germany	
GU	Japan	
GMS	Hong Kong	

2.8 Sub-Contractors Information

DRI is a garments factory. It only made readymade garments. For completing a product there is also need for washing and accessories and also many other things. DRL has contract with many of them factory which work for them and help them to complete the making of product successfully. Below is the list of their sub-contractors with whom they deal regularly.

Table 5: sub-contractors information of DRL

Wash	Factor Name: Agami Washing Ltd Factory Address: Chandra, Kaliakoir, Gazipur Contact Person : Md. Sumon Sarkar Designation: Senior Manager-HR & Compliance Email: sumonsarkar.afl@dekkkoisho.com Mobile : +880 1841297153
Printing & Accessories	Factory Name: Dekko Accessories Ltd. Factory Address: Hemayatpur, Saver, Dhaka Contact Person: Md. Main Uddin Mohan Designation : Senior Manager- Compliance & Audit Email : mohan@dalbd.com Mobile : +8801847128926
Embroidery	Factory Name : Globus Embroidery. Factory Address: Eastern Housing, 2 Phase, Mirpur, Dhaka Contact Person: Md. Helal Uddin Akha Designation: Asst-Manager Email:helal.gel@dekkkoisho.com Mobile: +88018477128930

2.9 Organogram of Dekko Ready Wears Ltd.:

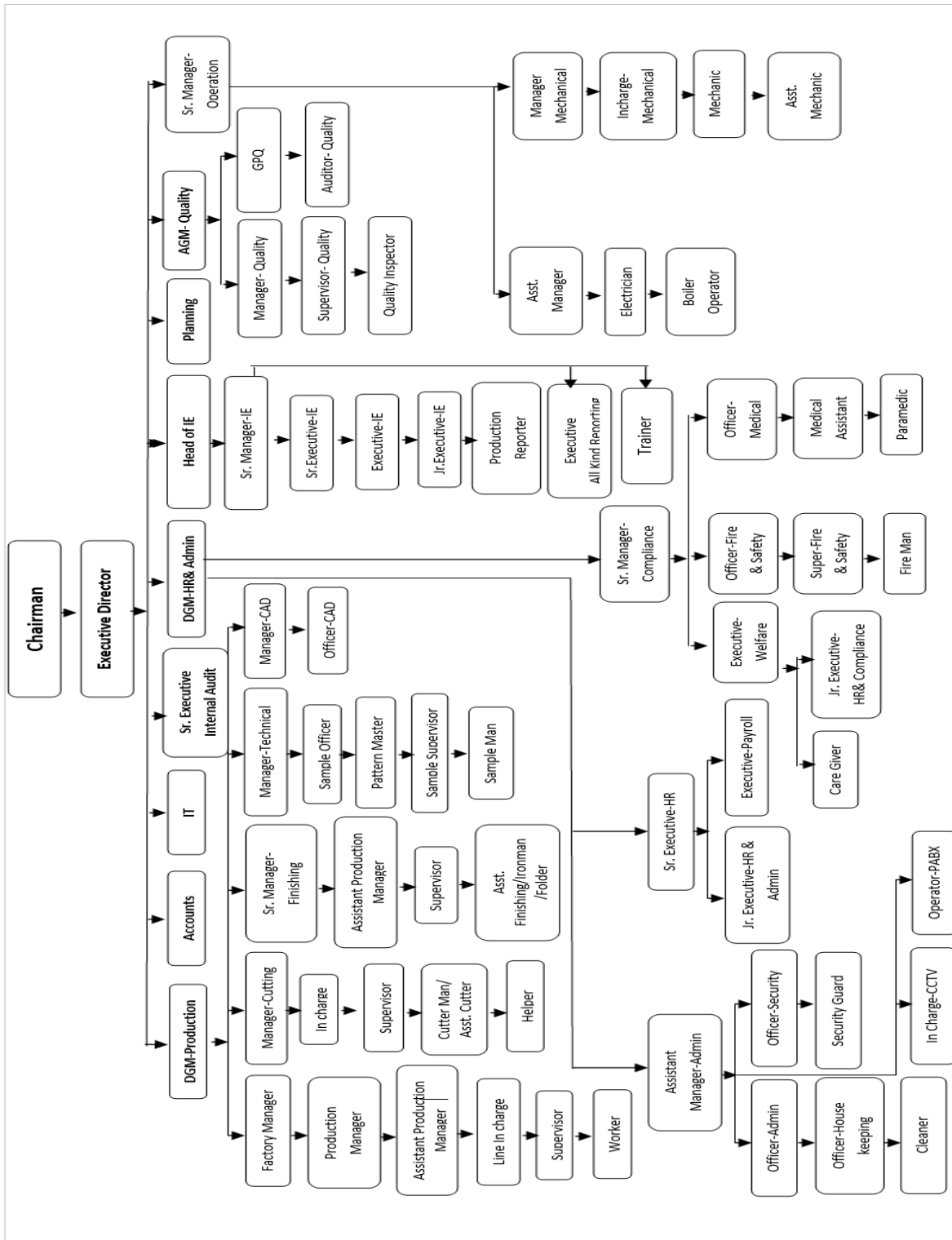


Figure 1: Organogram of DRL

Chapter 3

Industry Analysis

3.1 Industry size and Growth Trends

Bangladesh is a developing market in the world, a tiny Southeast Asian country with a dense population. Bangladesh's readymade garments industry, also known as the Textile industries, is the nation's most visible ambassador in the worldwide market.

Agriculture has been the backbone of the economy and the primary source of revenue for the population of Bangladesh, a country made up of villages, just as it's been in India. The government intends to reduce poverty by increasing agricultural output and establishing food production self-sufficiency. Aside from agriculture, the country is worried about the expansion of the export sector. Bangladesh's exports have accelerated and altered dramatically over time. Jute and tea were the primary export-oriented sectors when Bangladesh was established. However, the jute sector's importance in the country's economy has deteriorated as a result of floods, falling jute fiber prices, and a significant drop in global demand (Spinanger, 1986). Following that, the focus was switched to the role of the manufacturing sector, particularly in the clothing industry.

Bangladesh's garment industry has been a major export sector and a major source of foreign money for the past 25 years. Exporting garments currently produces roughly \$5 billion in revenue for the government each year. About 3 million people are employed in the business, with 90% of them being women. Quotas under Multi-Fibre Arrangement 1 (MFA) in the North American market and special market access into European markets are two non-market components that have played a critical role in ensuring the garment industry's continued prosperity. The entire process is inextricably linked to the trend of manufacturing relocation.

Bangladesh wants to become a middle-income country by 2021, and the RMG industry will play a key role in that. Bangladesh has set a goal of \$50 billion in clothing exports by 2021, and it appears to be on track to meet that goal. Bangladesh's overall exports increased by 5.81 percent to \$36.67 billion in the previous fiscal year, according to the Export Promotion Bureau (EPB),

primarily to an increase in clothing exports. According to EPB, garment exports increased by 8.76 percent this fiscal year, which was 1.51 percent higher than the target.

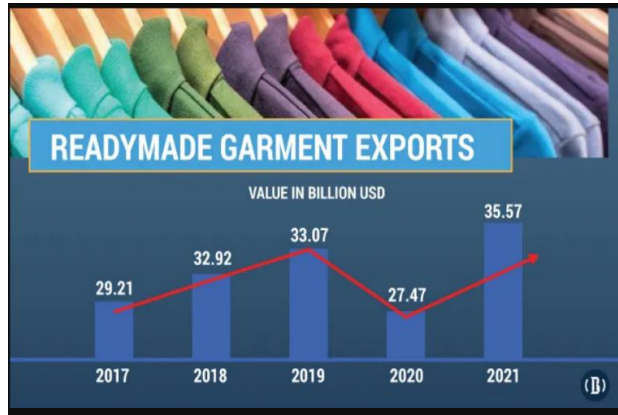


Figure 2: Garments industry growth (source: google)

Bangladesh's garment sector has grown by 79 percent in the last seven years, from \$19 billion to \$34 billion in yearly revenue. Bangladesh is now the world's second largest exporter of garments, with the sector accounting for 80% of the country's overall export revenues.

3.2 Maturity of the Industry

Bangladesh has maintained an annual GDP growth rate of 6% on average despite its low resources. With the largest export-earning capacity, the RMG business has grown to be a prominent industry in the country. In the 2017/18 fiscal year, this industry accounted for 83 percent of the country's total export revenues, which reached more than \$30.61 billion in exports.



Figure 3: number of garments factory (source: google)

The number of textile mills in the industry is also steadily expanding at a moderate to fast rate. Bangladesh had 4482 factories in MY 2016/17, which climbed by 3.10 percent to 4621 in MY 2018/19. From MY 2018/19, it is predicted to climb 1.53 percent to 4764 in MY 2020/21.

Bangladesh's garment industry, as a global supply hub, is emphasizing on conformity and sustainable development. The number of green factories in Bangladesh is steadily expanding, and it has now surpassed 100. The cost of garment production in the country grew by 30% between 2014 and 2018. In addition, from December 2018, the minimum pay for garments workers has increased by 51%.

3.3 External economic factors and their effect on the industry

External economic variables can be beneficial to a particular business or market, but they can also be detrimental. Unlike the other elements, these can have a good or negative impact on the garment sector.

Quick Returns: The most crucial feature is that this area offers investors speedy profits. This is the only industry in the country that pays out in three to five years. Furthermore, as the world's second-largest garment exporter, the sector provides tremendous growth potential. Furthermore, due to rising production costs, China is losing ground, opening up a huge opportunity for Bangladesh to gain market share.

Availability of Labor: Bangladesh's greatest advantage over its competitors is its inexpensive and large workforce. Bangladesh has a lower minimum salary than China, Cambodia, India, and Vietnam. There are also roughly 37 private and public universities in the country that generate textile graduates each year, adding to the segment's qualified labor. Furthermore, the sector benefits from favorable government regulations, bank facilities (for raw material purchases), and enhanced backward connections supporting industries.

The Benefit of Duty-Free Shopping: Bangladesh is classified as a Least Developed Country (LDC), which grants it duty-free market access or lower tariffs in many developed and developing countries throughout the world. For the trade of various products, Bangladesh has duty-free access to 52 countries, including the EU, the United States, Australia, Switzerland, Japan, Turkey, Russia, Norway, New Zealand, China, South Korea, Thailand, Malaysia, and India. Many trade

agreements, such as the SAARC Preferential Trading Arrangement, the Asia-Pacific Trade Agreement, the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, the South Asian Free Trade Area, and the Trade Preferential System among OIC member states, have been signed by Bangladesh. However, when the pandemic swept the entire world, various variables had an impact on this industry. The impact of the pandemic on external elements is also having an impact on Bangladesh's garment sector. The elements listed below can occasionally work in favor of the garment business, but they can also work against it during and during a pandemic.

The following are some of the factors that have a detrimental impact on the industry after and during the pandemic:

Inflation and the general level of prices: Inflation is defined as the availability of cash in the market accompanied with an increase in price level, whilst recession is defined as the inverse of inflation. Because of the diminished worldwide demand after COVID-19 hit Bangladesh, businesses were compelled to retrench staff or even halve their wages. On the other hand, the cost of daily necessities increased dramatically as people began to buy far more than they required. Despite the fact that the general price level of ready-made clothing has remained unchanged, it is unavoidable that workers are suffering in their daily life as a result of order cancellations.

Interest Rates on Loans: The coronavirus pandemic has had a significant impact on all businesses. The BGMEA requested government assistance to save the garment industry since the companies' discretionary money was fast dwindling. All bank managing directors and CEOs advised all the garments directors over the phone that the 9% loan rate would be implemented. Implementation of the single digit lending rate would not be problematic because the Bangladesh Bank has taken various steps to create liquidity in the money market.

Costs of Labor: It is regarded as one of the world's most contentious issues. Bangladesh has been providing low-cost labor to the global garment industry. Although the cost of labor is low in comparison to the international market, as a developing country recently hit by such a pandemic, it has become tough to manage the salaries of its employees or workers since global demand has decreased. Companies, too, couldn't afford the low-cost labor. As a result, layoffs or wage cuts were inevitable. Around 60 companies did not pay their workers before the Eid-ul-Fitr holidays, according to the Bangladesh Garment Manufacturers and Exporters Association (BGMEA), and

478 enterprises closed more than two months before Eid. Orders worth more than \$3.15 billion have been canceled or delayed by Western merchants. Workers of Medlar Apparels Ltd and Adiyat Apparels Ltd demonstrated on May 14 morning for the payment of full wages, other arrears, and the reopening of the factories as a result of the lockdown.

Monetary system: Bangladesh's economy is a mixed bag. Because it is mainly run on an open market policy, it is extremely difficult for businesses to stay up with global competition. Our garment sector competes with other worldwide corporations while also contributing to the country's earnings. Following the epidemic, businesses found it difficult to cope with declining foreign demand while also keeping staff with lower disposable income. Hundreds of people were laid off in order to save the companies and the industry as a whole. It was one of the most well-received films following the Rana Plaza tragedy.

Income and distribution of national income:The economic environment is influenced by the amount of national income and how it is distributed. A larger Economic Output eventually aids a country's development. Consumption rises as a result of increased national revenue, which is distributed to the masses. Because the outbreak is causing the industry to lay off workers, it has a negative influence on national revenue and redistribution.

Rates of exchange:The exchange rate refers to the rate at which one country's currency is exchanged for another country's currency. It is the value of a foreign currency in terms of one dollar. The dollar (which is regarded the standard for currency rates) varies a lot as a result of the pandemic. In overseas markets, when a country's currency rate against the dollar falls, imports become more costly and exporting become less costly (Corsetti & Marin, 2020).

Taxes: The taxation policy of a country has a significant impact on a firm. Almost every country in the globe has extended the deadline for filing taxes, providing taxpayers with respite. India, Sri Lanka, Singapore, Malaysia, and Vietnam have all extended different return filing deadlines in response to the challenges faced by taxpayers. For example, in India, the submission of Goods and Service Tax Returns for the months of March, April, and May has been postponed until June 30. Small businesses (with a revenue of less than Rs 50 million) pay no interest, late fees, or penalties, while all others pay a reduced interest rate for late filing. Bhutan, a small country, has postponed payment of income tax by a quarter. Companies in Bangladesh are required to pay their expected income tax in advance on a quarterly basis.

Monthly VAT: The Bangladesh Federation of Industries and Chambers requested that the tax filing deadline be extended, but the National Bureau of Revenue (NBR) did not respond. For individuals who have been impacted hard by the crisis, they may consider delaying their taxes for at least a quarter. Alternatively, they may allow distressed enterprises to ask for such a delay and provide approval on a case-by-case basis after careful examination.

The Money and Capital Markets: Commercial banks are required to issue loans at a rate of 9% interest, according to a Bangladesh Bank order. Most banks are hesitant to lend money since many of their customers are withdrawing funds to cover their expenses, causing their liquidity to plummet. As a result, the money market is finding it increasingly difficult to lend money to businesses (Hasan, 2020). Garment manufacturers are losing money due to the sharp decline in foreign orders. As a result, companies that are listed on the stock exchange (such as Dragon Sweater and Spinning Limited, Hamid Fabrics Limited, and others) are unable to pay dividends

3.4 Seasonality

According to the most recent data from the World Trade Organization, Bangladesh remained in second place in garment exports in 2019, with 6.8% of the market share. Bangladesh also exported \$34 billion worth of garments in 2019, according to WTO data. Several trade partners, including the Association of Southeast Asian Nations (ASEAN) and the European Union, have already signed free trade agreements (FTAs) and regional trade agreements (RTAs) with the country (EU). Bangladesh has a long way to go, especially because we are on the verge of losing our status as a least-developed nation (LDC) and may lose trade benefits as a result. Bangladesh exported \$2.4 billion in garment items between August 1 and August 22, 2020, according to BGMEA data, a 45.8% rise over the same time previous year. Bangladesh, for example, focuses 74% of its production on cotton-based fibers, whereas the global fashion trend has shifted to man-made fibers. Bangladesh should concentrate more on man-made fibers when producing garments in order to gain a larger portion of the global market. Bangladesh's readymade garments are primarily exported to the United States and Europe.

RMG exports to the United States were \$5.22 billion in 2020, down from \$5.92 billion the previous year, according to the data. According to the data, total garment imports into the United States from

throughout the world climbed by 22.19 percent to US \$29.21 billion during the period under review, up from \$23.91 billion in the same time in 2020.

Bangladesh's RMG exports have been dominated by shirts, trousers, jackets, t-shirts, and sweaters. The lion's share of overall exports were trousers and t-shirts. Trousers and t-shirts accounted for 27.85 percent and 28.14 percent of total Bangladesh RMG exports in MY 2018/19, respectively. Sweater and jacket exports climbed at a rapid rate of 26.60 percent and 23.62 percent, respectively, from MY 2016/17 to MY 2018/19, outperforming all other garment categories. Shirts, trousers, jackets, t-shirts, and sweaters are predicted to grow at a CAGR of 5%, 7.31 percent, 11.18 percent, 9.36 percent, and 12.51 percent in MY 2020/21 from MY 2018/19 to \$2,563.55 million, \$7,990.82 million, \$5,420.70 million, \$8,385.86 million, and \$5,388.25 million, respectively. According to the BGMEA, technological advancements and a longer winter as a result of western global warming have boosted sweater export. Implementation of modern technology has improved product quality and capacity, leading to an increase in work orders from international buyers.

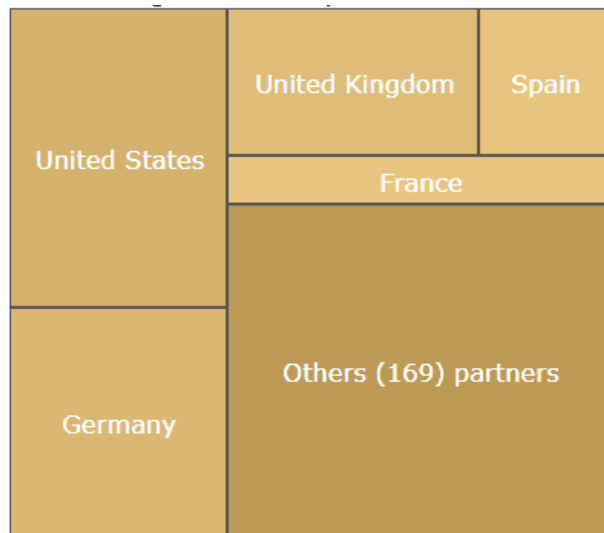


Figure 4: Bangladesh Garments export destination (source google)

3.5 Technological Factor

Today, just like in every other industry, technological involvement has become a fundamental component of the clothing industry. It has forever changed the industry all around the world.

Bangladesh is not technically sophisticated in comparison to other international market heavyweights. They continue to employ outdated technologies since purchasing ultra-modern technology is prohibitively expensive. Although the govt's duty-free imports of garment technology and equipment, fixed and operating expenses are rising. It would be a boon to Bangladesh's garment sector if they could buy this from the local market. China, Vietnam, Taiwan, and other Asian countries have a technological advantage.

The significant influence of technical change in Bangladesh's garment industry is linked to apparel makers' increased adoption of new technology in response to broader changing global store strategies. As recognized worldwide brands prefer the creation of green buildings with green manufacturing to preserve an eco-friendly environment in industrialisation, apparel manufacturers are increasingly choosing for green technology to boost international competitiveness. RMG staff used to cut cloth by hand, which took a long time, but now that automated methods are in place, time and production expenses can be saved, according to entrepreneurs. The RMG industry is the country's economic backbone, accounting for more than 82 percent of total exports and employing over four million people. Bangladesh Garment Manufacturers and Exporters Association (BGMEA) established a target of increasing apparel exports from \$28 billion to \$50 billion by 2021 in 2014. Although the goal is lofty, it is not insurmountable. To make the Ready - made garment export dream a reality, technology and a qualified staff are required.

Companies can now make clothing more quickly, efficiently, and at a lesser cost thanks to technological advancements. It aids in the reduction of trash, as RMG is one of the most waste-producing sectors in the world. Excessive production fueled by strong demand for creative patterns could result in a slew of issues, including increased chemical waste in the manufacturing process and thousands of tons of garbage from abandoned garments. The environmental cost of a garment is increased by toxic dyes used in production and landfill garbage from abandoned apparel. Information technology is used in every aspect of dispatching, from staff attendance to shipment. A similar incident occurred at one of my previous employers. A technical issue caused the server to crash. So, what's next? Official work ceased, no product was produced, and a backlog of work arose?

As a result, IT is not just a useful tool, but also a requirement for conducting business. We can't imagine a situation where we don't require real-time data or information without using an IT

application. A few examples of IT tools used in the clothing business are listed below. Fabric accounts for over 70% of the operational costs of garment manufacturing plants, with average loss ranging from 8% to 16%, owing to differences in mill length and width, among other things. ThreadSolSoftwares' IntelloCut software assists garment producers in reducing fabric waste from the time the fabric is purchased to the time the garment is finished. During the process, up to 10% of the material can be saved, as well as production time and effort. IntelloCut interacts easily with production operations to reduce fabric waste and maximize fabric utilization. "Our solutions are unrivaled in terms of technological advancement, giving producers the much-needed flexibility of automated planning and tracking. Our system's unique characteristics can assist them cut their efforts in half, saving them money on fabric "ThreadSol Softwares' Country Head (BD), Anas Shakil, stated. Sri Lanka, China, Vietnam, the Philippines, Indonesia, and Pakistan are among the countries that have implemented the technology. Epic Group, Pacific Jeans, Beximco, Saitex, Saiham, Dekko, and Aman Graphics all use ThreadSol's IntelloCut in Bangladesh. Manufacturers saw significant improvement in storage and cutting system procedures and efficiency after implementing intellocutmany. The scenario in Bangladesh's garment industry is changing, and many firms are attempting to automate their labor procedures and integrate new technology in their manufacture.

3.6 Regularity, Political and Legal concern

The smooth and reliable political system of the country is critical to the country's development. Economic growth is aided by democratic rule, tax policy, and monetary policy. Bangladesh is considered as a promising rising tiger thanks to its readymade clothes and textile sector. However, due to political upheaval, strikes, wars, labor unrest, and other factors, a dark shadow has recently appeared in Bangladesh's sky.

The following are most apparent and significant elements of the political structure:

- There isn't a true democratic framework in place.
- The rule of law is absent.
- Terrorism and corruption
- Among political parties, there is a lack of democratic practice.
- Islamists are exerting pressure.

Despite the challenges highlighted above, Bangladesh's government has made a number of constructive actions and initiatives to support the garments industry. Investment from other countries is encouraged. Favorable regulations, tax holidays, export-import policies, investment incentives, and lower import levies on capital machinery and spare parts are just a few of the significant initiatives that are assisting the garments industry. Even labor politics can be an impediment to production at times. Garment manufacturers should strive to establish a healthy working environment for their employees so that labor politics do not stymie output.

Most of the time, the government fosters the garment sector by lending a helping hand. As a result, a great number of businesses have sprouted up around the city. However, the government's attention has been brought to a recent fire at a number of well-known garment factories. It has resulted in various legal and regulatory concerns. Workers do not receive adequate salaries and remuneration, a safe working environment, or adequate safety from their employers (Muhammad, 2011). That is why the government has stepped in to enforce the law and order system in this case.

Governments are now attempting to adopt initiatives that will help the garment sector expand.

3.7 Competitive Environment and Changes in the Competitive Environment

Bargaining power of suppliers: Suppliers include those who generate raw materials, semifinished products, labor, and components, among other things. These raw materials and moderately commodities are purchased by businesses. An industry's growth is aided by common understanding between the provider and the buyer. When one party gets powerful, the other tries to bargain for a better deal. Bangladesh's garment suppliers are formidable in terms of materials because the majority of them are imported. However, Bangladesh continues to import raw resources at world prices. She has a solid reputation among suppliers for paying on time. Furthermore, B2B LC1 is permitted in Bangladesh, providing additional benefits to the industry. Raw resources are currently coming from domestic markets, which is a good indicator. And the influence of local suppliers is growing by the day. In the case of labor supply, however, industry has an edge. Because labor is plentiful in this country, labor suppliers are not as strong as raw material providers.

Bargaining power of customers: Bangladeshi garment buyers have more power to negotiate than they do. Bangladesh is the world's second-largest garment manufacturer. As a result, she caters to a wide range of global markets. Bangladeshi clothing are extremely popular all over the world for two reasons: It manages to keep both quality and cost in check. Because Bangladesh's input costs, such as labor, are very low. Buyers can easily switch to Chinese and Indian products if Bangladesh fails to provide both quality and low prices. Bangladesh is also the finest place to outsource clothing. As a result, many global companies are flocking to Bangladesh to complete their projects. That is why this country has so many franchises and subsidiaries. Finally, the points system, GSP, and cheap labour are helping to create some Bangladesh's garments business generates over 80% of the country's total export revenue. As a result, Bangladesh's government has eased the rigorous standards for accessing the market. Bangladesh is said to have joined the worldwide market with only nine units. In Bangladesh, there are already around 5000 units that are regularly producing goods. Friendly govt policy, the availability of cheap labor, and domestic & global demand are all factors contributing to the dramatic increase in units (Clark & Kanter, 2011). Bangladesh's government has always lent a helping hand to this business in order to boost export revenue. Because Bangladesh has a lot of underutilized resources, the threat to the local market isn't as great. She was unable to achieve economies of scale, allowing new entrants into the market. As a result, since there is high growth, the threat of new entrance is negligible. However, because it is a labor-intensive industry, there is a high risk of new entrants on a global scale. With their vast labor and technological advantages, numerous countries throughout the world, such as China and India, are attempting to grab the international market.

Threat of substitutes: Because China and India are gaining the market faster than Bangladesh, replacements for Bangladeshi clothes are a threat. Because of weak nation barding and a lack of capacity to influence clients, she is slipping behind to some extent. As a result, customers sometimes choose other items to Bangladesh. Furthermore, the government has a lower international reputation than China and India. Furthermore, due to the unstable political climate, power crises, and red tape, many multinational businesses are hesitant to come. As a result, in order to ensure profitable growth, Bangladesh must try to replace low-cost, high-quality products for Indian and Chinese products.

Competitive rivalry between existing players:

In the international market, Bangladesh competes with a number of major competitors. She is ranked 6th in the US and EU markets for garment product supply. China and India are major market players. Bangladesh imports raw materials and employs other production elements such as inexpensive labor to produce finished goods at a lower cost (Mottaleb & Sonobe, 2011). She would be the market leader and cost leader in this business all over the world if she could use local materials. Because there are so many firms of similar size in the business, rivalry between current players is more or less fierce. They both have comparable market-capture methods. Furthermore, due to the nature of products, there is little differentiation between players and their offerings. equilibrium in the global market for Bangladeshi clothing.

Threat of new entrants/Barriers to entry: Yes, new entrants pose a challenge to established businesses. It is still a booming sector in Bangladesh, thanks to increasing global demand.

However, this is not a major issue because, as a result of high demand, the industry is growing at a rate of 15% per year on average. There are also no significant hurdles to departing the sector. A large number of foreign investors are flocking to Bangladesh to participate in the garment industry. As a result, there are always some checks and balances to stockholders.

Chapter 4

Breakdown of Main Duties

4.1 Days of Work

Dekko ReadyWears LTd. offered a three-month full-time internship. I had to come to the office six days a week, from 9 a.m. to 5 p.m., as an intern. On Friday, there was a weekly holiday.

4.2 Departments Attendant During Internship Period

I worked as an intern at the Industrial Engineering department (IE). IE is involved in several aspects of the garment business, although its primary concentration is garment stitching. Before starting work under the IE department of the sewing division, I was sent to other departments to have a better knowledge of the responsibilities of IE executives. Department I Attendant:

- Store
- Cutting Section
- Sewing Section
- Finishing Section

4.3 Store

Prior to the start of garment production, the required amount of fabric must be preserved in the garments. All subsequent procedures, such as spreading, cutting, stitching, and so on, were done with the cloth obtained from here. As a result, this division is vital to the factory's smooth running. Dekko ReadyWears Ltd keeps all of the needed fabrics and accessories in stock for all orders. The primary duty of this section is to store all of the raw materials needed to make garments.

Inventory is stock that is kept between two operations to ensure that they run smoothly. It can alternatively be described as assets that are meant for sale, are being produced for sale, or will be employed in the production of commodities. Inventory is kept largely for two reasons: to reduce

sourcing costs (where demand can be projected) and to reduce the risk of running out of stock (where requirement cannot be predicted).

The bigger the inventory, the higher the capital blockage and/or the space required; on the other side, the lesser the inventory, the more likely there will be production disruptions or disgruntled consumers. As a result, inventory management is critical for a clothing manufacturing. The primary purpose of any garment manufacturing systems is to reduce overall production time, which leads to lower inventory costs.



Figure 5: Store department of DRL

4.3.1 Organogram of Store Department:

A staff of well-trained officials looks after DLR's store. The positions of the store's manpower are listed below in ranking.

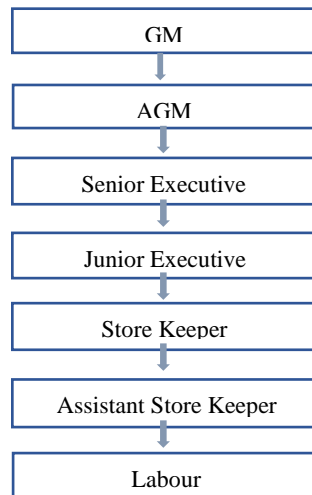


Figure 6: organogram of store dept of DRL

3.2 Major Focused on Store Department:

- To fully comprehend the retail department's functioning flow chart.
- How to deal with any problem

4.3.3 Work Flow Diagram of Store Department:

Store department follow a certain procedure to maintain the whole work of the department.

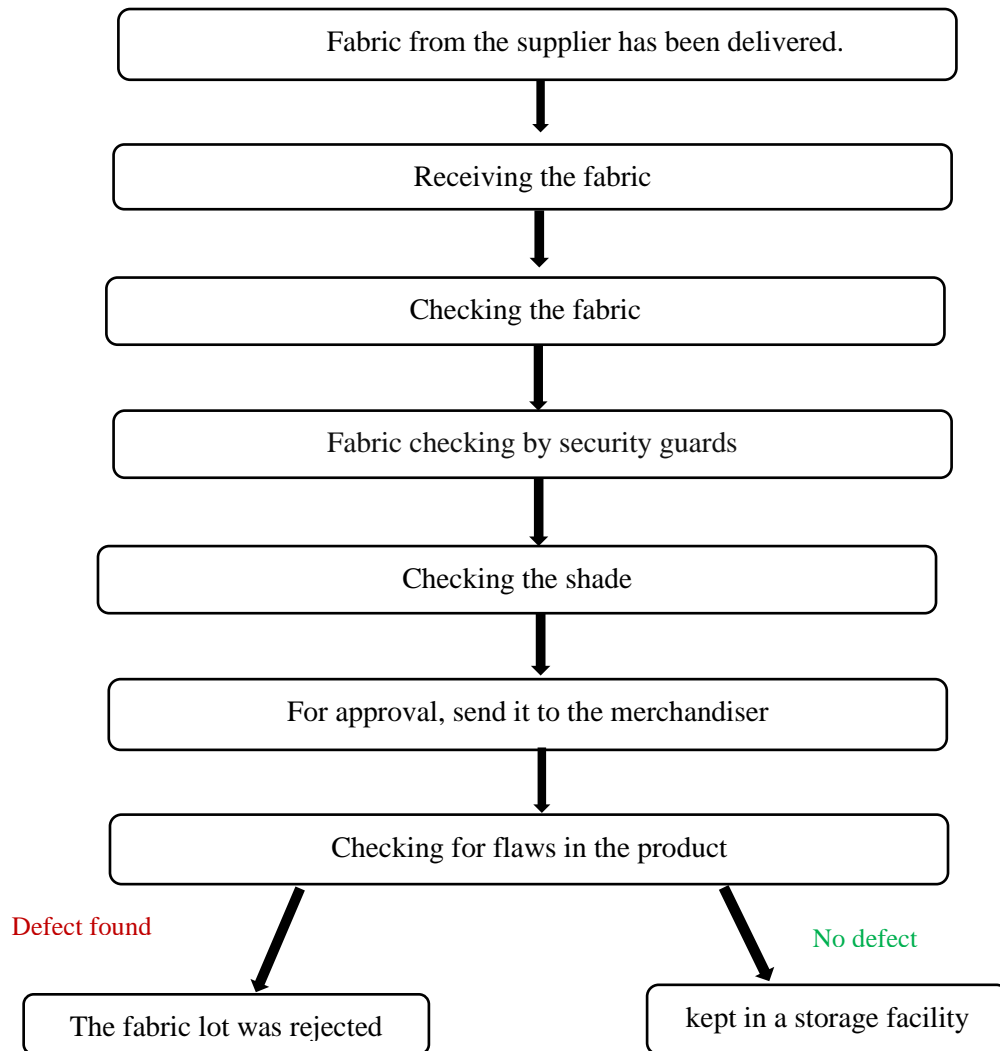


Figure 7: Work flow diagram of Store dept of DRL

Fabric has been delivered from the supplier: The needed quantity of cloth is then ordered from the selected fabric provider.

Receiving the fabric: In the textile and apparel industry, it is the second responsibility of any fabric store department. Fabric is delivered to the store in-charge with the following invoice from the fabric supplier.

Checking the fabric: A four-point system was used to inspect the cloth in this case.

Security personnel inspecting the fabric: Security guards should confirm the number of fabrics according to the invoice. You immediately notify the garment merchandiser if it is discovered to be short.

Checking the shade: The fabric store department has a critical assignment ahead of them. Fabric shade should be examined here by following the many forms of shade that the buyer has already accepted. Various fabric hues have been discovered here, which should be taken in mind while choosing a lot.

The fabric lot was rejected: The fabric lot must be rejected here based on fabric grading such as A, B, C, D, and so on. A quality controller is in charge of this task (Q.C).

For approval, send it to the merchandiser: The garment merchandiser receives all fabric-related information from the fabric store department at this point. If there are any severe flaws or problems, the merchandiser talks to the suppliers about them and takes the required steps to correct them.

Checking for flaws in quality: The quality controller needs to check fabric quality according to the buyer's quality recommendation in this section.

Stocked in the store: Finally, after filling out all of the aforesaid information, textiles are stored in order to aid in the subsequent steps, such as cutting, sewing etc.

4.3.4 Checking for Quality:

DRL's store department has its own quality control department. They performed a variety of experiments to determine the fabric's quality, including:

- Checking for various fabric faults.
- 2.Check the fabric's length and width.
- Separate fabric by shade, also known as shade segregation.
- Examine the fabrics for shrinkage.

4.3.5 What they do in the event of a inconvenience:

Inconveniences such as when the store department receives less or more materials from the supplier, the commercial department is notified via mail, and the commercial department deals with the provider. It has been decided by the company that if the supplier delivers 3% fewer than the specified quantity, it will be okay.

4.4 Cutting Department:

The cutting department has the responsibility of cutting fabrics and supplying cuttings to the sewing department. The capacity of the cutting department is determined by the daily feeding needs of the sewing lines. One of the primary goals of cutting is to get a proper and smooth cut. If a garment is not cut properly, it may create discomfort and may not fit the body properly. As a result, it's critical to cut the pattern forms precisely. The precision of a cut is usually determined by the cutting process used. Manual or computer-controlled knives can be used to cut a piece of clothing. In DRI they used manual knives to cut the garments pieces. Many expert cutting men ensure the quality cut of the garments as this step mostly ensures the successful sewing of the garments so this step is most important. Many experts of DRI always try to ensure quality cutting.



Figure 8: cutting dept of DRI

4.4.1 Major Focused on Cutting Department:

- To fully comprehend the cutting department's workflow chart.
- How they maintain quality at cutting section.

4.4.2 Organogram of the Cutting department:

The cutting department at Dekko ReadyWears Ltd. is separated into three sections. Each cutting unit is assigned to a certain unit. A robust, well-trained individual team maintains each unit. The positions of the cutting manpower are listed below in ranking

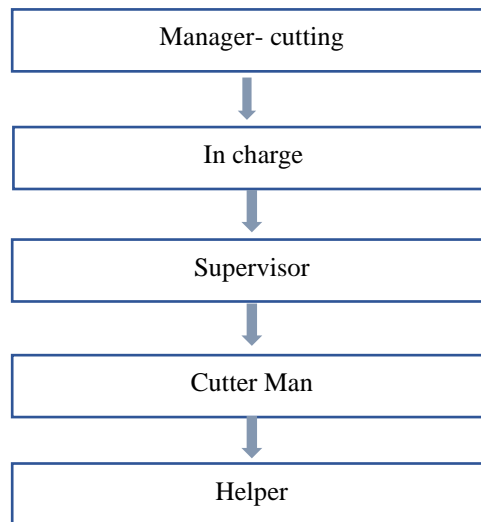


Figure 9: organogram of cutting dept of DRL

4.4.3 Work Flow Diagram of Cutting Department:

To complete all the work properly and neatly cutting department of DRL also follow a certain work flow diagram.

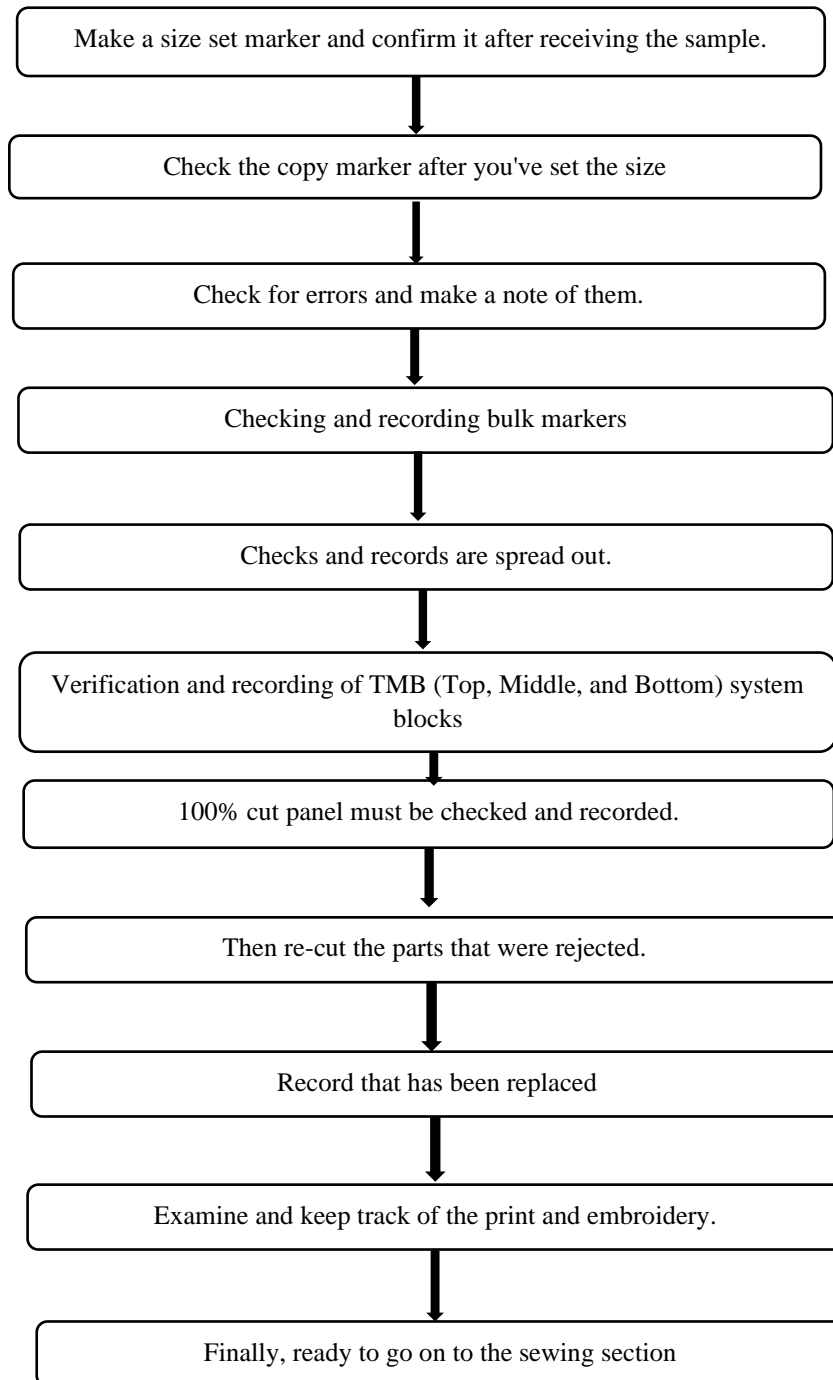


Figure 10: flow chart of cutting dept of DRL

4.4.4 Quality of Cutting Department:

As well-measured cutting is essential to produce the right form of garment product, quality control of the cutting section is critical in garments. Cutting is the first step in the garment manufacturing process. Before manufacturing a fabric, you must cut out separate pieces according to the approved pattern, and you must ensure that all cutting components are 100 percent precise.

Parts of quality control cutting section:

Quality control of cutting section mainly divided into four parts. Those are:

1. Marker Inspection
2. Spreading Control
3. Cutting quality control
4. Pieces Goods Inspection

In Marker Inspection following things are inspected:

1. Marker Length
2. Marker Width
3. Lay quantity
4. Style/ Lot
5. Ratio
6. The measure of all individual parts marked in marker

Following in spreading quality control

1. Cut numbers
2. Ends
3. Leaning
4. Narrow Goods
5. Remnants
6. Counts
7. Ply height
8. Fabric Fault

Cutting quality control:

1. Number of parts
2. Miss cut
3. Ragged cutting
4. Notches
5. Matching piles

Piece Goods inspection

1. Quantity
2. End out
3. Knot
4. Spot
5. Hole
6. Thick yarn
7. Missing yarn
8. Shading
9. Slab

For the Industrial Engineering Department (Sewing Section), a very basic comprehension of the sewing section is required for the Industrial Engineering Department. No one can do the job of an IE executive properly unless they understand the sewing section.

4.5 Sewing Department

Sewing is a crucial step in the garment manufacturing process. All of the pieces of a garment are stitched together here with the help of a needle and thread. An order can be finished on time if a sewing process flow chart is kept. The cut components meet the sewing section for bulk production after bulk cutting. Garment pieces are inserted into the input portion, and serial numbers are used to match them. The garment pieces are then stitched in order. On a sewing line, the machines are arranged in the order in which they perform their tasks.

DRL's sewing division is divided into three sections (DRL1, DRL2, and DRL3). There are eight separate production lines in each sector, for a total of 24 lines. Each line works on producing different sorts and styles of clothing at the same time.



Figure 12: sewing section of DRL

4.5.1 Organogram of sewing Department:

A staff of well-trained officials looks after DLR's sewing section. Sewing section is the most important part of garments manufacturing so expert and experienced manpower is needed in this department. The positions of the sewing manpower are listed below in ranking.

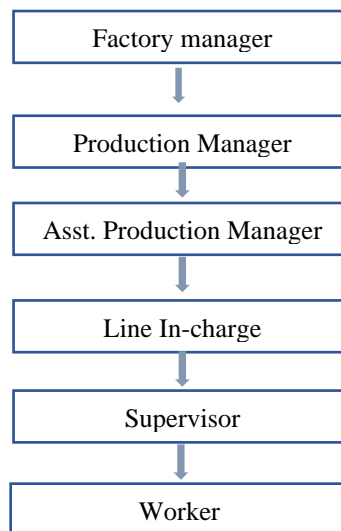


Figure 13: organogram of sewing dept of DRL

4.5.2 Work Flow Diagram of Sewing Department:

Cutting department of DRL maintain a standard work flow diagram for clean and neat work.

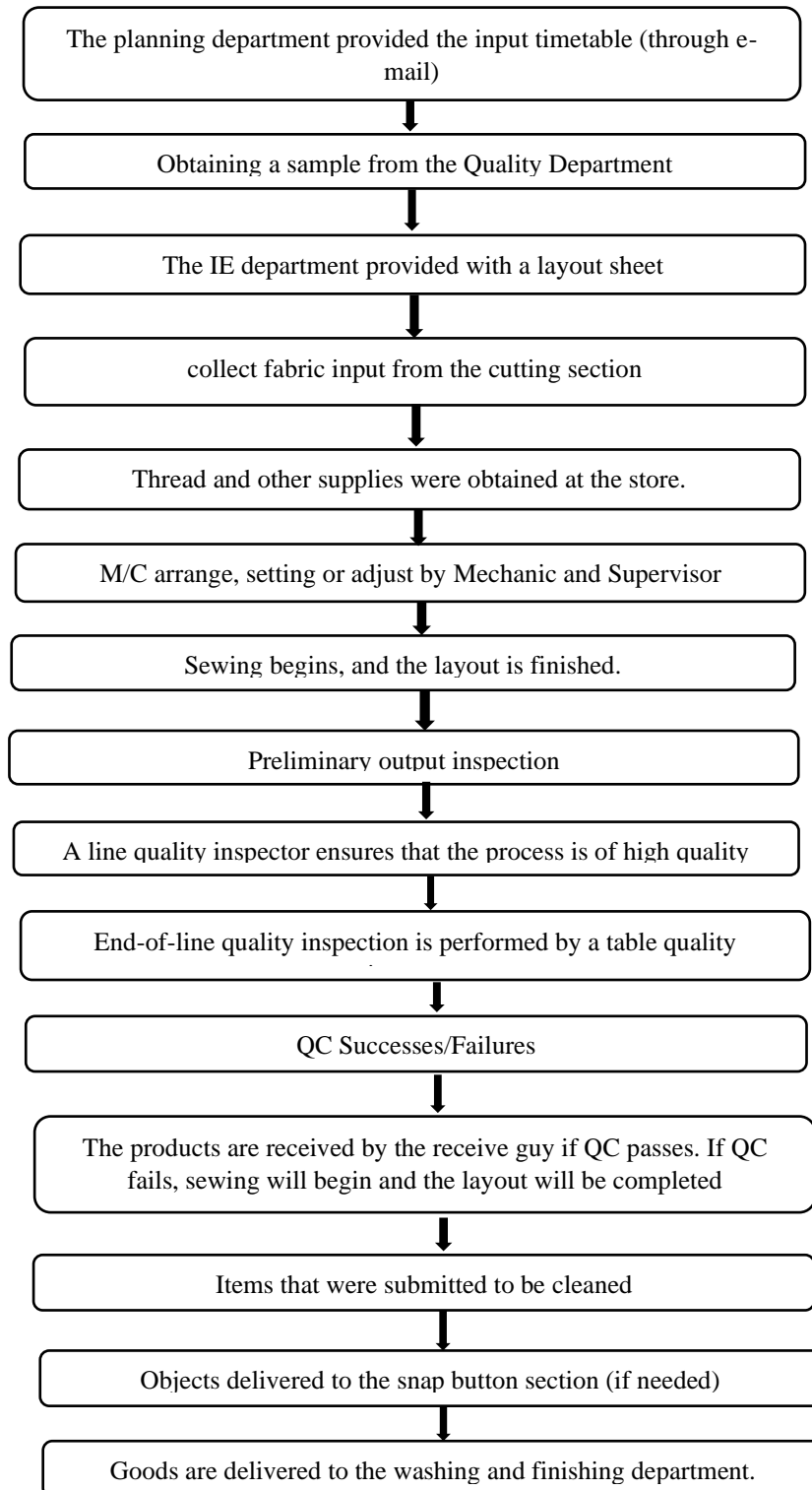


Figure 15: work flow diagram of sewing dept of DRL

4.5.3 Machine used in Sewing:

- Plain Machine or Lock Stitch Machine
- Over lock Machine
- Button Holing Machine
- Feed of the Arm (FOA)
- Kansai or Multi needle chain stitch machine
- Single Needle & Double Needle Chain Stitch Machine

4.5.4 Process of Manufacturing a Basic Shirt:

The sewing line is divided into 3 parts for manufacturing a basic shirt completely from scratch.

They are:

- Make section
- Input section (sleeve, front, back)
- Output section

Table 6: parts of a basic shirt

No	Process Name	Machine
Make Section		
Collar		
1	Collar top part fusing	Continues Fusing m/c
2	Collar finish pattern mark on collar	Pencil and pattern
3	Collar trim	Overlock m/c
4	Collar top stitch	SNLS
5	Collar Turn	Hand Work
6	Collar outline (1/4 top stitch)	SNLS
7	Collar band fusing	Continuous fusing m/c
8	Collar band rolling	SNLS
9	Collar and collar band attach	SNLS
Cuff		
10	Cuff fusing	Continuous fusing m/c
11	Cuff rolling	SNLS
12	Cuff turn and match with pair	Hand work
13	Cuff top stitch (1/4 top stitch)	SNLS
Input section(Front part)		
14	Front pair tuck and care label join	SNLS
15	Front Button placket make	SNLS
16	Box placket make	Kansai m/c
17	Pocket positioning	Pattern

18	PKT Rolling	SNLS
19	PKT iron + scissoring	Iron + scissor
20	PKT attach to front + placket close	SNLS
Back part		
21	Main and size label joint	SNLS
22	Label attach to back part	SNLS
23	Yoke attach to back part	SNLS
24	Yoke top stitch	SNLS
Sleeve part		
25	Gamble attach to body	SNLS
26	SLV placket fold and iron	Iron + folder
27	SLV placket attach	SNLS
Output section (Assembly)		
28	Shoulder joint	SNLS
29	Shoulder top stitch	SNLS
30	SLV joint to body	Overlock m/c
31	Armhole Top Stitch	SNLS + Folder
32	Collar joint to body	SNLS
33	Collar closed	SNLS
34	Collar stitch	SNLS
35	Side Seam	FOA m/c
36	Cuff attach to SLV	SNLS
37	Bottom Hem	SNLS + Folder
38	BTN Hole (BTN placket, Collar)	BTN Holing machine

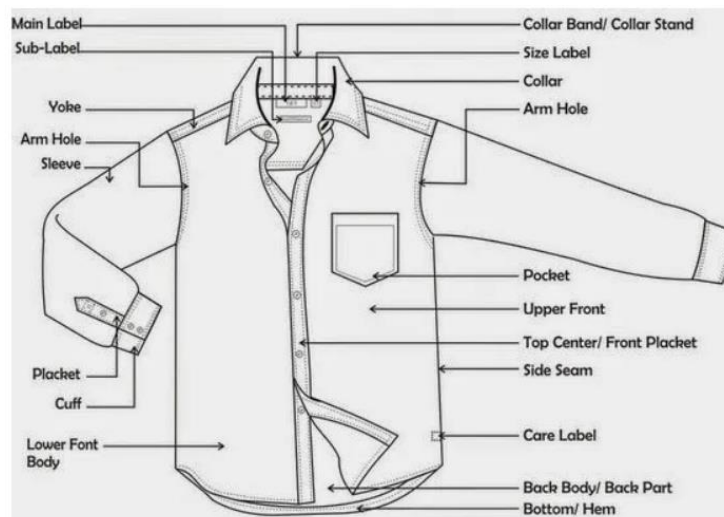


Figure 16: parts of a basic woven shirt (source: google)

These are the steps involved in making a basic shirt. The method differs depending on the style. Depending on the demand, it may add additional procedures and machinery to the production process of a given style of garment.

4.6 About Industrial Engineering Department

My internship with the Industrial Department is now complete (IE). The textile and garment industries are facing substantial problems as a result of a range of issues, including global competitiveness, increased manufacturing costs, declining productivity and efficiency, and employee attrition. Industrial engineering expertise and formulas are commonly used to overcome those challenges in the garment and ready-made textile sectors. The IE of DRL has three units, just like the sewing unit (DRL1, DRL2, and DRL 3). An IE in-charge and an IE executive are assigned to each unit. The IE-DRL3 team was allocated to me.

4.6.1 Organogram of IE department:

A staff of well-trained officials looks after DLR's IE department. The positions of the IE department manpower are listed below in ranking

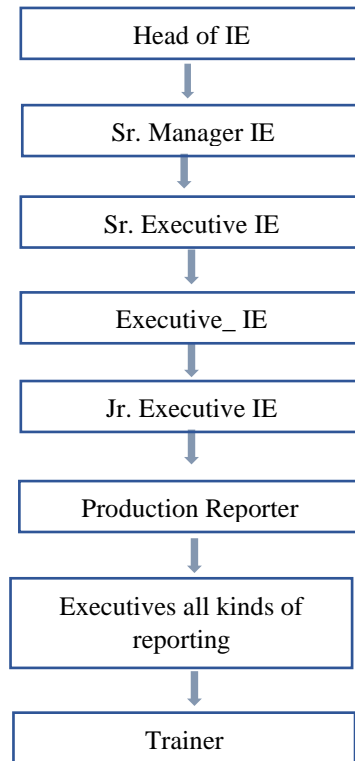


Figure 17: : organogram of IE dept of DRL

4.6.2 Work Flow Diagram of IE Department:

The standard work flow that is followed by the IE dept of DRI is given below:

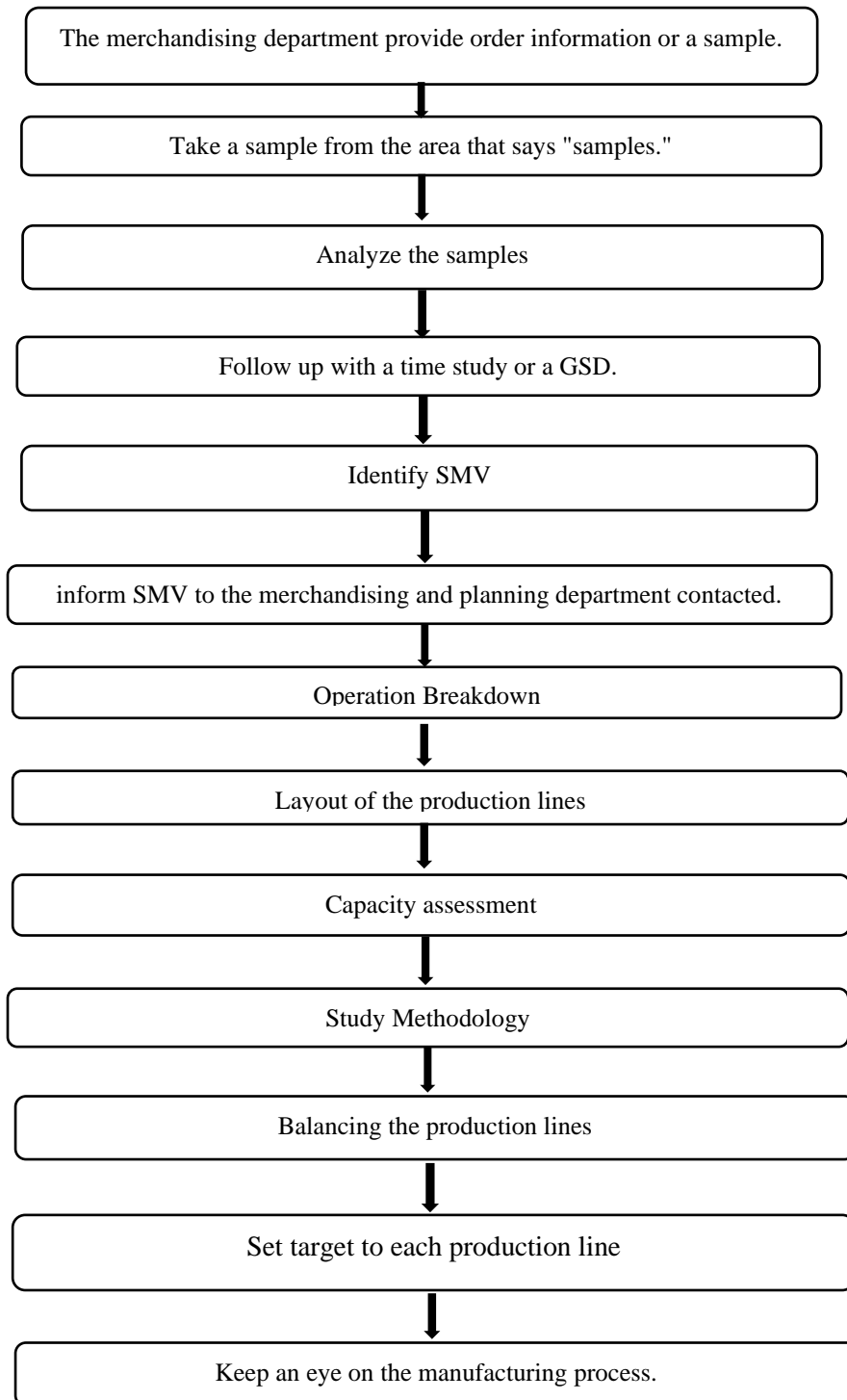


Figure 19: work flow diagram of IE dept of DRI

4.6.3 Main Responsibilities as Industrial Engineering Department Intern:

My duties included assisting the IE team with their regular work. To fulfill my duties as an IE intern, I conducted the following tasks on a daily basis.

- Line layout
- Capacity study and Line Balancing
- Setting daily production target
- Assessment of newly recruited operator

4.6.4 Line Layout:

A production line is a group of operators and workers who work under the supervision of a single line chief. The "make section," "input section," and "output section" are the three sections of the production line. Operators, helpers, iron men, three sector supervisors, and a one-line chief make up each production line. At the end of every segment, there are three quality checking tables. After passing each section's quality check point, each part of the final product moves on to the next.

The way machines are arranged in a manufacturing line is referred to as layout. In their plant, DRL's production line uses a side-by-side line arrangement approach. Depending on the number of processes, the number of machines and personnel varies from style to style. However, the line structure is similar to the side-by-side layout, with the exception that the machine sequence varies depending on the procedure of a certain design. One style of clothing may have several processes, whereas another style may have fewer processes.

The Jr. Executive will go to the production floor after obtaining the process of a certain style from the IE Sr. Executive and, with the support of the line chief and mechanics, will set up the line layout for that specific style of garments before starting bulk production. Correct line planning improves the efficiency of the entire line by smoothing out the work flow.

4.6.5 Capacity study and Line Balancing:

The total amount of output that may be produced in a given period is known as capacity.

An operator's capacity on a production line is the number of times he or she can complete a process in one hour. The capability of a collar maker operator is 120 collars if he or she can complete 120 collars. That implies in an hour, he or she can produce a maximum of 120 collars.

Formula used for capacity study:

$$\text{Capacity} = (3600 \text{ sec} / \text{average cycle time} + 15\% \text{ of average cycle time})$$

$$\text{Average cycle time} = (\text{sum of cycle time} / \text{sum of cycle number})$$

Cycle time is the amount of time it takes to complete a process from start to finish.

A capacity study is conducted for an individual operator's process, and the results are used to balance the line and set the daily production target for that line.

After recording the cycle time in manual sheet then this time give input in the excel pre-made format of capacity study formula then it give the desired result.

CAPACITY STUDY SHEET
DEKKO READYWEARS LTD.
MIRPUR, DHAKA

Line No: 23 Oper: Bassi Saha State: D.S.S Date: 29/11 Study by: [Signature]

Sl. No.	Name	ID NO.	MAC	OPERATION DESCRIPTION	OBSERVATION					Actual	Rating	Remarks
					1	2	3	4	5			
1	Rafik	01	Iron	Iron Press	10	10	10	10	10	320		
2	Munni	02	Iron	Collar Iron Collar Mark	10	12	10	10	10	150		
3	Rifa	03	Hand	Collar Top Stitch	16	12	15	15	15	140		
4	Sadia	04	Hand	Collar Mark	16	12	15	15	15	140		
5	Kotira	05	Hand	Collar Mark	20	20	20	20	20	180		
6	Moyra	06	Hand	Collar Mark	25	25	25	25	25	180		
7	Sherin	07	Hand	Collar Mark	25	25	25	25	25	120		
8	Pinky	08	Hand	Collar Mark	15	16	15	15	15	110		
9	Kayra	09	Hand	Collar Mark	15	16	15	15	15	110		
10	Moushumi	10	Hand	Collar Mark	12	12	12	12	12	120		
11	Hafsa	11	Hand	Collar Mark	25	25	25	25	25	120		
12	Asma	12	Hand	Collar Mark	25	25	25	25	25	120		
13	Hina	13	Hand	Collar Mark	15	15	15	15	15	120		
14	Murta	14	Hand	Collar Mark	25	25	25	25	25	120		
15	Rifa	15	Hand	Collar Mark	25	25	25	25	25	120		
16	Saba	16	Hand	Collar Mark	12	12	12	12	12	120		
17	Fariha	17	Hand	Collar Mark	24	24	24	24	24	120		
18	Sahana	18	Hand	Collar Mark	24	24	24	24	24	120		
19	Murta	19	Hand	Collar Mark	18	18	18	18	18	120		
20	Sarvi	20	Hand	Collar Mark	20	20	20	20	20	120		
21	Murta	21	Hand	Collar Mark	12	12	12	12	12	120		
22	Sahana	22	Hand	Collar Mark	12	12	12	12	12	120		
23	Ruma	23	Hand	Collar Mark	21	21	21	21	21	180		
24	Shamim	24	Hand	Collar Mark	19	19	19	19	19	140		
25	Nabreen	25	Hand	Collar Mark	22	22	22	22	22	180		
26	Rahim	26	Hand	Collar Mark	22	22	22	22	22	180		
27	Mani	27	Hand	Collar Mark	20	20	20	20	20	180		
28	Rina	28	Hand	Collar Mark	25	25	25	25	25	140		
29	Kolpana	29	Hand	Collar Mark	12	12	12	12	12	90		
30	Murta	30	Hand	Collar Mark	22	22	22	22	22	86		
31	Haniya	31	Hand	Collar Mark	17	17	17	17	17	140		
32	Salvin	32	Hand	Collar Mark	17	17	17	17	17	140		
33	Nasrin	33	Hand	Collar Mark	17	17	17	17	17	140		
34	Rakha	34	Hand	Collar Mark	17	17	17	17	17	140		
35	Hafsa	35	Hand	Collar Mark	20	20	20	20	20	140		
36	Tasmin	36	Hand	Collar Mark	20	20	20	20	20	140		
37	Nasrin	37	Hand	Collar Mark	21	21	21	21	21	160		
38	Moyra	38	Hand	Collar Mark	16	16	16	16	16	180		
39	Sahana	39	Hand	Collar Mark	24	24	24	24	24	180		
40	Fariha	40	Hand	Collar Mark	24	24	24	24	24	180		
41	Rahim	41	Hand	Collar Mark	24	24	24	24	24	180		
42	Shamim	42	Hand	Collar Mark	24	24	24	24	24	180		
43	Parvin	43	Hand	Collar Mark	24	24	24	24	24	180		

Figure 20: time taken for capacity study on manual sheet

Below is the figure of a final capacity study of a specific style of garments. This is the output after given input of manually taken time of cycle time of processes.

Capacity Study																
Section: SEWING (DRU-05)		Style no: SF21RS1035	Input date: 8 Nov	Add machine / Manpower												
Revise: HBSY SELLER		Draw: M5	Study date: 10 Nov	Play from other / Balancing												
IE: MID TO HDUUL ISLAM		Line no: 23	Line plant Qty: 2000	Increase Capacity / Efficiency												
Sl. #	Operator Name	IDN. #	Operation	Blpqr	Cycle time (Pc)	Cyc	Indrct	Operat	SNV	Lit	Ind	Corrective Action Plan (CAP)	SNV	Lit	Ind	Corrective A
45	NASIMA		ARIBOLE TOPSTITCH	MC	1 2 3 4 5	Time	Capacity									
46	RAZA		ARIBOLE TOPSTITCH	CSF	1 2 3 4 5	Time	Capacity									
47	FAHMA		COLLAR MATCH & CUT MARK	FP	1 2 3 4 5	Time	Capacity									
48	HELINA		COLLAR JOIN	SNLS	1 2 3 4 5	Time	Capacity									EOT (2 HR)
49	SABENA		COLLAR TOP STITCH	SNLS	1 2 3 4 5	Time	Capacity									
50	FARZANA		COLLAR TOP STITCH	SNLS	1 2 3 4 5	Time	Capacity									
51	KASHIDA		SIDE SCISSORING	FP	1 2 3 4 5	Time	Capacity									
52	SOLEMAN		SIDE JOIN	FOA	1 2 3 4 5	Time	Capacity									EOT (1 HR)
53	IBROVA		SIDE JOIN	FOA	1 2 3 4 5	Time	Capacity									
54	KASHIDA		THREAD CUT	FP	1 2 3 4 5	Time	Capacity									
55	SUMADYA		CUFF ASSEMBLY	FP	1 2 3 4 5	Time	Capacity									
56	BASQANA		CUFF JOIN	SNLS	1 2 3 4 5	Time	Capacity									
57	SUM		CUFF JOIN	SNLS	1 2 3 4 5	Time	Capacity									
58	LALY		HEM SCISSORING	FP	1 2 3 4 5	Time	Capacity									EOT (2 HR)
59	MUNNI		HEM MAKE	SNLS	1 2 3 4 5	Time	Capacity									
60	HUMIDA		HEM MAKE	SNLS	1 2 3 4 5	Time	Capacity									
61	ROSNA		HOKE MAKE (1*)	FP	1 2 3 4 5	Time	Capacity									EOT (2 HR)

Summary		Current Manpower
Total operation	41	OP: 25
Total Manpower	38	MP: 6
CP: 55%	17.5	Trn: 3
Line 507 (Based on Study)	14.87	TL: 14
Balance Target per line @ 100%	26	
Balance Target per line @ 75%	17	
Capacity per line @ 100%	28	
Potential Capacity by Line Balancing	145	
Current achieve	130	
Current Achievement%	75%	
Potential Achievement	82%	

Figure 21: capacity study using excel

Line balancing is defined as "the act of designing a smooth production flow by allocating processes to workers in such a way that each worker completes the given job in an even amount of time." It's a system in which we satisfy production targets and can always find the same quantity of work in progress in any operation at any time of day.

Tools required for line balancing:

- Stop watches
- Spread sheet (Microsoft Excel)

Step 1: Capacity study

List all operations (along with operator names) in the order they appear in the paper. For five consecutive cycles, use a stopwatch cycle time (time study) for each procedure. Calculate the operators' hourly capacity using an average cycle time

Step 2: Target Setting

Set your intended production per hour from one line using the capacity data above. It's usually computed using the formula "Target per hour = Total number of operators X 60/garment SAM." The current hourly operator production report can be found here.

Step 3: Identification of bottleneck area

Compare each operator's capacity to the target capacity in the capacity study table. Each and every operator whose capacity is exceeded. The output of a line with a bottleneck operation will be less than the desired output. Improving the output of the imbalance line without also improving the output of the bottleneck activities is impossible. A bottleneck operation functions similarly to a weak link in a chain.

Step 4: Eliminate bottleneck from the line

- Whenever possible, club operations are carried out. Give the operator another operation with less work content if their capacity exceeds the intended output. Considering the type of sewing machine and the colors of the sewing thread
- Operators that shuffle. Low-performers are used in operations with low work content. High performers should be used where the work material is more demanding.
- Work aids and accessories might help you cut down on cycle time. Work aids, guides, or attachments can be utilized to assist the operator in managing pieces during sewing, positioning, cutting, and disposing of finished tasks. Assist the operator if at all possible. It will reduce operating cycle time.
- Improve the layout of your desk and your approaches. The ideal workstation arrangement and technique of work are the most essential areas for increasing output from a specific operation. There's always the possibility of line balancing by enhancing the mechanism of bottleneck operations.
- Increase the number of operators at bottleneck operations. Adding one more machine is a simple task compared to others. Compare the costs and benefits of adding another machine to the line before making the decision. It's simple to compare the two by evaluating machine productivity in each situation.

- Extra effort should be put in at bottleneck operations. When each operator in the line takes a break for lunch or tea, the bottleneck operator can continue working to feed the operator next to him. He can take a break afterwards. Tell this operator to work an extra hour at the end of the day to reduce the WIP.

Balancing production line help to

- A better net income is achieved by keeping inventory costs low.
- Maintaining regular inventory levels allows the operator to work all day, allowing him or her to earn more money through enhancing efficiency.
- Supervisors can enhance other areas by keeping the line balanced since they can better use their time.
- Price stability is achieved through balanced manufacturing, which leads to repeat sales.
- Better production planning comes from balanced output.

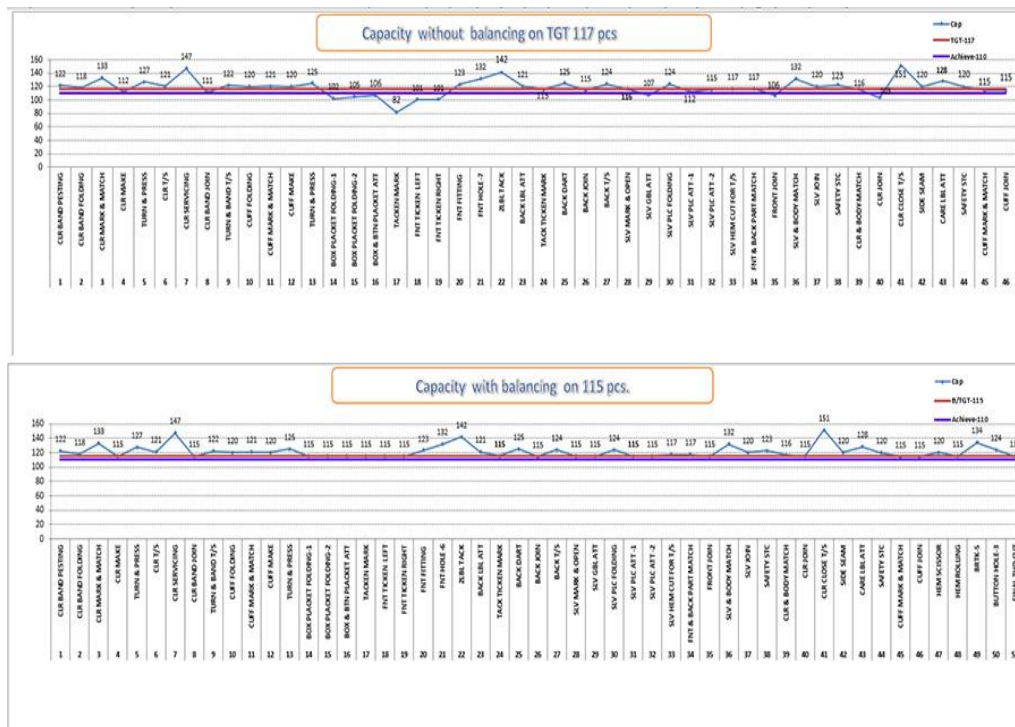


Figure 22: capacity without and with line balancing

4.6.6 Setting daily production target:

The "daily production target" is the amount of product produced by a competent worker in a day at standard performance. The line production target, also known as the daily line production target, is the total amount produced by the production line throughout their daily total working hours at standard performance.

Calculation of daily production target:

There are some points which must be needed during the calculation of garments production, those are-

- The standard allowed minutes (SAM),
- Number of operators- working in a line,
- Number of hours running-production line work in a day,
- Line efficiency,
- Total break time including Launch, Tea, and Others (Non- productive time)

Formula:

Daily production of a line = [Total No of Operators *{(working hour in a day* 60 min)- Non-productive time}/Standard allowed minutes] * line efficiency

4.6.7 Assessment of Newly Recruit Operator:

The industrial engineering department is in charge of conducting on-the-job tests to determine whether or not candidates are illegible as sewing operators.

When hiring an operator for direct placement on a line, she must be a trained operator who has already worked for another company. We need to test their stitching skills on the following parameters for such trained operators:

- Varied operations have different levels of efficiency.
- The candidate's seams and stitching are of good quality.
- What machines can she operate?
- What kinds of fabrics can she work with? (Thicker textiles, knits, woven or light fabrics, etc.)

Procedure for Testing:

In the operator recruitment test, the processes listed below are followed.

1. Request that candidates create mock-ups of clothing components for the factory-made product. DRL, for example, makes shirts, so we assign candidates to sew collars, cuffs, front plackets, and chest pockets to the front panel.
2. On the following parameters, evaluate their work on the mock in terms of quality and performance level. They pass on their sewing abilities and transmit them to HR for HR verification and recruiting formalities if they make suitable mocks. They are rejected if they do not reach a certain standard.
3. Examine how candidates operate a machine while creating mocks.
4. How do they thread the machines?
5. How they attached a needle to the machine?
6. How they attach the bobbin into the shuttle?
7. how quickly they operate a machine, and so on.

We may determine how good prospects are by using this method and then transferring them to the HR department to complete the rest of the recruitment process.

DEKKO ISHO
Operator's Performance Evaluation

Date: 22-Dec-2021

Part A: Introduction: This part will be filled up by HR department. New information provided by HR & Administration.
 Candidate Name: [Blank]
 Division: [Blank]
 Department: [Blank]
 Job No: 17
 Candidate's Name: [Blank]
 Candidate's Address: [Blank]
 Candidate's Phone No: [Blank]
 Candidate's Email: [Blank]
 Candidate's Education: [Blank]
 Candidate's Experience: [Blank]
 Candidate's Reason for Applying: [Blank]

Part B: Skill Determination: This part will be filled up by HR department.
 Candidate's Skill Rating: [Blank]
 Candidate's Reason for Applying: [Blank]

Part C: Candidate for Selection Skill Rating (%) for Operators.
 Serial No. | Designation | Skill Rating (%) | Remarks

1	Factory Operator	75	
2	General Operator	80	
3	General Operator	85	
4	Operator	90	
5	Operator	95	
6	Operator	100	

Part D: General Criteria for Evaluation.
 Serial No. | Item | Full Number | Remarks

1	Appearance & Details		
2	Attendance		
3	Observance - Supervisor		
4	Observance - Line Chief		
5	Others		
Total			

Normal Process: Critical Process:
 Operated Machine: Determined Wage:
 Proposed Wage: Recommended Wage:

Applicant: [Blank] I.E. O/E: [Blank] AP/MPM: [Blank] I.E. Manager: [Blank] Factory Manager: [Blank] HRD: [Blank]

Note: This form shall be used for recruitment and performance appraisal of Sewing Operator. General Criteria is not applicable for recruitment.

Figure 23: operator recruitment procedure

4.7 Finishing department

My internship concluded in the finishing department. I was assigned to the finishing department's IE to have a better understanding of how IE ideas are applied in the finishing department.

4.7.1 About Finishing department:

A finishing department's main responsibilities include thread clipping, garment inspection, and ironing. The packaging division of the finishing department is where garments are folded, tagged, and packed. Unlike cutting and sewing section, the finishing dept of DRL also has 3 sections (DRL1, DRL2, DRL3).



Figure 24: : finishing dept of DRL

4.7.2 Organogram of Finishing department:

A staff of well-trained officials looks after DLR's IE department. The positions of the IE department manpower are listed below in ranking

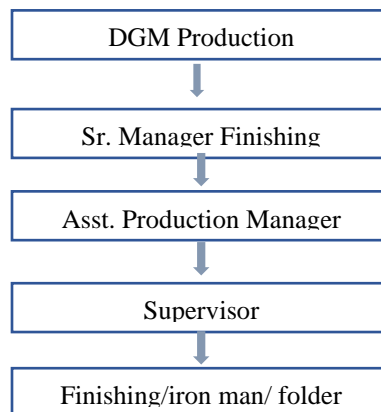


Figure 25: organogram of finishing dept od DRL

4.7.3 Work Flow Diagram of Finishing Department:

Finishing department of DRL maintain a standard work flow diagram for clean and neat work.

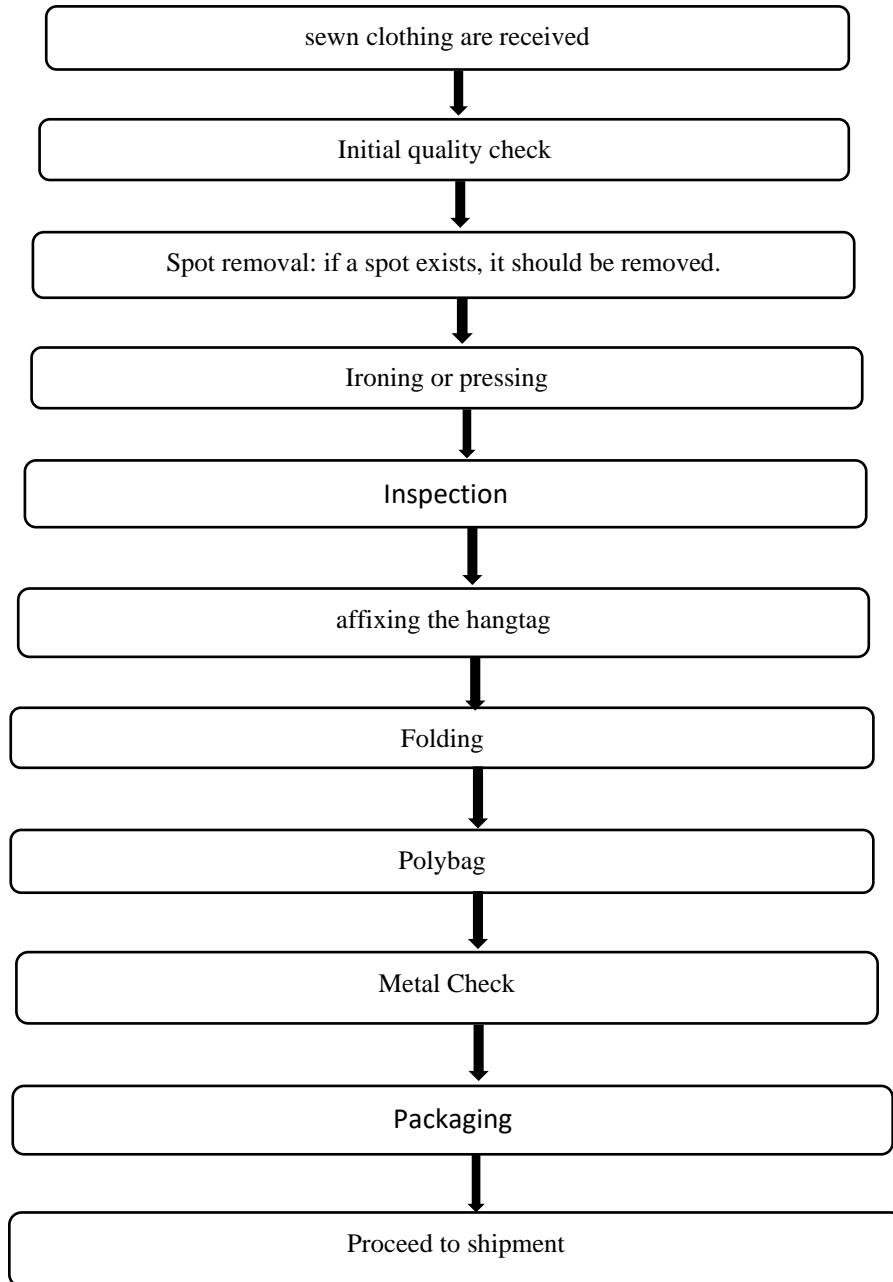


Figure 26: work flow diagram of finishing dept of DRL

4.7.4 IE Responsibilities on Finishing Department:

The majority of IEs exclusively practice IE ideas on the sewing floor. In the finishing step, similar tools can be used. I've outlined a few things that can be done in the finishing department without any more ideation or skill development in the following paragraphs.

Standard Time (SAM) for completing jobs (activities)- Estimate the SAM for finishing work in the same way that you would for sewing operations. Determine the SAM of a task using the Time Study Method or synthetic data (PMTS). Prepare a finishing section operation document as well. You can plan finishing production correctly, predict finishing costs, and personnel requirements by specifying the SAM of the finishing project.

Examine the arrangements of existing finishing room workstations- Examine whether the workstation layout may be improved. Workstation layout can be redesigned using the motion economy principle.

Suggestions for a more efficient material handling system for finishing room employees- There is always room for improvement.

Work on improving the method- Keep track of all completed jobs. Ironing, spot removal, garment inspection, thread cutting, folding, and packing are examples of activities. Investigate several methods of working on various activities. Using the Method Study idea, you can standardize workers' working ways for finishing room activities if they don't use the same methods for the same task. Spend time honing a technique. We can shorten the cycle time of a task by enhancing the technique of executing it.

Maintain WIP in between two workstations- Capture finishing production data and calculate WIP. You can work on levelling of workload in each process.

Train checkers and other workers – increase the skills of workers by training on their task.

Chapter 5

Analysis

5.1 Company Level Analysis

My internship was performed at Dekko ReadyWears LTD, a clothing factory owned by the Dekkho Isho Group. In Bangladesh's garment industry, the Dekko Isho Group is a well-known name. As an intern for DRL, I mostly work in the Industrial Engineering department, but I also get to view the entire garment production system. In Bangladesh's garment industry, there has been a lot of talk about workplace violence. DRL strives to promote a healthy work environment throughout the facility. DRL takes the following steps in the production to ensure a healthy working environment for its employees and workers:

- DRL carefully keeps an organized environment, which protects workers from accidents while also allowing them to work more effectively.
- DRL maintains a clean work environment and has a water supply filter on each floor.
- The plant has a welfare foundation to safeguard the safety of female workers, and a female office is always available to assist female workers with any working issues. They also have a complaint box where female workers can lodge their grievances, which are forwarded straight to the plant general manager, who then takes appropriate action.
- Occupational safety and health (OSH): DRL places a premium on OHS for plant workers and employees. It has a medical center on the premises to provide suitable care in the event of an emergency.
- Inside the facility, there is a grocery store where workers may get everyday supplies such as rice, cooking oil, flour, soap, and other items. They can purchase items on credit from this store and pay the balance due with the following month's salary.
- DRL has a separate department dedicated to fire safety. They are made up of fire officers and firefighters who work shifts to ensure fire safety. They hold fire drills to raise awareness among employees and workers.

5.2 Market Level Analysis:

In the Bangladeshi corporate world, the Dekko Isho group is well-known. They began their career in the paint industry in 1953 with Roxy Paint, and in the garment sector in 1983 with Dekko Garments Ltd. They've now expanded their firm into a variety of industries. They ventured into the fields of technology, agriculture, fashion, restaurants, and the furniture industry. In the clothing industry, they now have six factories: six for apparel and one for washing. They create 3 million garments per month and have a revenue of \$150 million per year. They have approximately 15,000 people working for them. Dekko Isho Group just opened a green factory, Dekko Garments Ltd (Green Factory), in 2021. This manufacturing also entails automation in a number of different areas.

The Dekko Isho group has established itself as a reputable name among global clients. Among the well-known brands they supply in Europe and the United States are Bestseller, Celio, Exprit, Edward, Carhatt, Fussl, CANDA, and Camaeu. For their remarkable success in the clothing industry, the Dekkho Isho group has received numerous national and international awards.

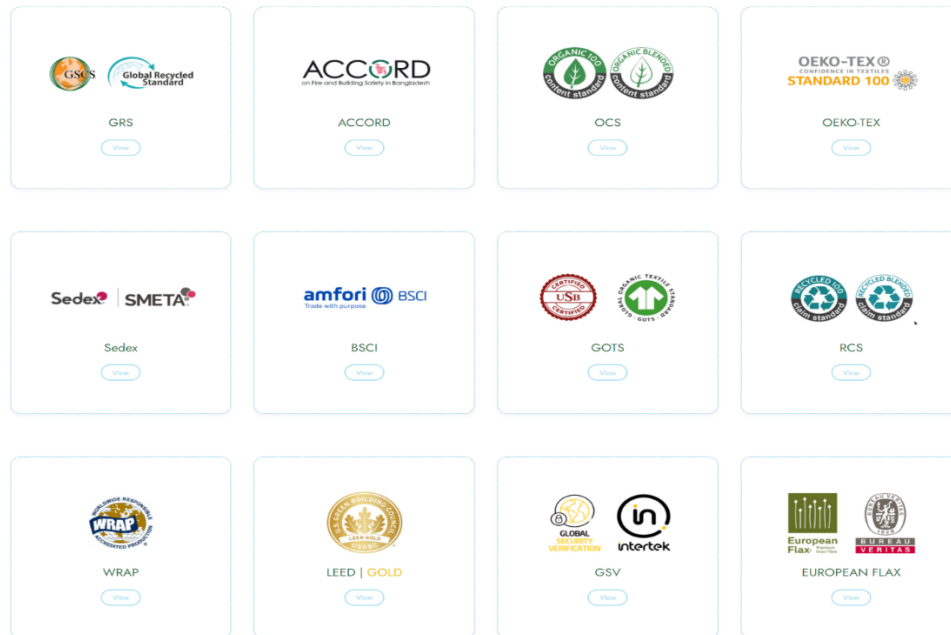


Figure 27: Awards and Certificates of Dekko Isho Group(source: DekkoIsho.com)

5.3 Professional Level Analysis:

Dekko ReadyWears Ltd is a factory of the Dekko Isho Group's clothing industry. In Bangladesh's clothing business, the Dekko Isho Group is a well-known name. They have a considerable presence in the Bangladeshi garment industry. I finished my internship in DRL's Industrial Engineering department. The purpose of an internship like this is to gain important practical experience. We have gathered a lot of theoretical information during the course of our four years of university classes on numerous areas. However, this internship course was the first in which I gained any real knowledge of the Bangladeshi job market and work locations. As a result, the internship's primary goal was to get real-world work experience. DRL's IE department taught me a lot throughout my three-month internship. But I was an intern in the IE department at DRL. In the garment business, the main duties of the IE department are to minimize costs, enhance profits, properly utilize available resources, and hire and train talented personnel. That's why, in order for me to gain a better knowledge of my IE responsibilities, my mentor assigned me to several garment production areas. I indicated before in this report what I've learned from working in other departments and how that knowledge helps me accomplish my duties as an IE intern. I have a thorough awareness of the entire garment manufacturing process, as well as how the IE departments contribute to the company's profitability. I am really thankful to DRL for providing me with such a fantastic opportunity, as well as to my supervisor, who assisted me in learning a new skill and adjusting to this completely new atmosphere throughout my internship period. Working here has also taught me soft skills such as communication, time management, empathy for others, and colleague respect. All of this knowledge will benefit me in the future in both my personal and professional lives.

Chapter 6

Recommendation & Conclusion

6.1 Recommendation:

DRL was founded in 2006 by the Dekko Isho Group. Since its inception, DRL has come a long way. It has made significant progress and is constantly working to enhance the working conditions for its employees and workers. One of the most significant areas in the garment manufacturing sector is Industrial Engineering. The IE department aids in the creation of high-quality clothes. By providing high-quality products on schedule, the IE department also helps to improve a company's image with potential customers. This department will benefit the organization in the long run if management pays greater attention to it. I've tried to highlight several areas of improvement in the IE department based on my job experience.

Facilitation: To ensure the smooth operation of the department's work and to create a dynamic competitive atmosphere, management should purchase more facilities such as computers and printers. Technological advancements will hasten the process.

Inter Department Communication: Improved inter-departmental communication should be a priority for management.

Advance Technology: They still utilize the old school way for several IE activities, and Excel is only used for calculations and documentation. They can tackle line balancing difficulties using modern IE technologies such as algorithmic techniques, such as the Meta-Heuristics Algorithm.

More opportunities for Students: Students should be able to participate in additional internships at the company. Both the kids and the company will benefit from this. Students will acquire valuable hands-on experience, and the organization will gain additional future employees.

Recreation for employee: The mental health and recreational requirements of employees should be prioritized by management. They should plan a picnic or go on a trip. This will encourage them to put in extra effort.

Increase Manpower in the department: They should expand the department's workforce. It will make the department work more smoothly and allow it to better handle the busy production period.

Facilities for Employee: More amenities for employees should be provided by the authorities. Better workplace equipment, such as more comfortable chairs and desks, should be provided, as well as making the office room more roomy. They should also make lunch arrangements and provide transportation for the office staff.

6.2 Conclusion

Bangladesh's garment sector is one of the country's most important. During my internship, I learned a great deal about the industry. After finishing this internship, I will have a better understanding of the garment industry's manufacturing operations as well as a glimpse into how management manages such a large workforce. This internship was quite beneficial. I've developed new skills and knowledge, and I've met a lot of new individuals. I gained knowledge of professional practice. During my internship, I understood that the most important aspect of determining the core cause of a production problem is observation. This internship also allowed me to discover my talents and limitations.

This internship course significantly aids in my learning of self-discipline, consideration, self-confidence, initiative, and problem-solving skills. Furthermore, when speaking with others, my communication abilities are a strength. Throughout my internship, I received a lot of guidance from my mentors, which helped me remedy my mistakes and avoid doing them again.

I was able to obtain practical experience, work in a pleasant setting, and network. For me, this internship was a success, and the most essential lesson I took away from it was the opportunity to improve my communication skills.

I'd want to express my gratitude to everyone who contributed to the success of my internship.

References

- Dekko Isho Gorup- Excellence in Innovation (<https://dekkoisho.com/>)
- BGMEA(<https://www.bgmea.com.bd/>)
- Mazedul Islam Soyeb, (May 1, 2018), Industrial Training Report on Woven Garments from (<https://rb.gy/bbcshc>)
- Debnath, Sajon; Hossion, Md. Sahadot; Sultanul Islam, Md., (April 11, 2019), Study on Activities of an IE in Sewing Section of a Garments Industry from (<https://rb.gy/bmnk7g>)
- FF-world of garments (<https://rb.gy/hdahny>)