

Report on
Yunusco (BD) Limited
Focuses on various functional departments

By
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An internship report submitted to Executive Development Centre, BRAC Institute of Governance and Development (BIGD), BRAC University in partial fulfillment of the requirements for the degree of Post Graduate Diploma in Knitwear Industry Management (PGD-KIM).

Executive Development Centre
BRAC Institute of Governance and Development
BRAC University
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Declaration

It is hereby declared that

1. The internship report submitted is my own original work while completing degree at BRAC University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

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Letter of Transmittal

Mohammad Sirajul Islam
Deputy Director, EDC, BIGD
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Subject: Submission of Internship Report on Yunusco (BD) Limited focuses on various department.

Dear Sir,

This is my pleasure to submit my internship report based on my industry attachment with Yunusco (BD) Limited.

I have attempted my best to finish the report with the essential data and recommended proposition in a significant compact and comprehensive manner as possible.

I trust that the report will meet the desires.

Sincerely yours,

Md. Yousuf Uddin

Student ID: 24281011

Post Graduate Diploma in Knitwear Industry Management (PGD-KIM)

Executive Development Centre, BIGD, BRAC University

10 November 2025

Non-Disclosure Agreement

This agreement is made and entered into by and between Yunusco (BD) Limited as the First Party and the undersigned student at Executive Development Centre, BRAC Institute of Governance and Development, BRAC University as the Second Party. The First Party has allowed the Second Party to complete three months long internship in partial fulfillment of the requirements for the degree of Post Graduate Diploma in Knitwear Industry Management. The Second Party will have the opportunity to work closely with the company's officials and access official data and information. Based on work experience and data, data, and information collected during the internship, and Party will prepare an internship report. The Second Party will use all sorts of data and information for academic purposes and will not disclose to any party against the interests of the First Party.

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Acknowledgment

At first, I would like to express my sincere gratitude to my industry supervisor, Mr. Ruhul Amin, for allowing me to take part in this internship program and for giving me the opportunity to work across different departments of Yunusco (BD) Limited. His continuous support, valuable advice, and motivation guided me throughout the internship period and helped me complete this report successfully.

I would also like to extend my heartfelt thanks to my academic supervisor, Mr. Sirajul Islam, for his constant guidance, encouragement, and valuable feedback. His supervision and constructive suggestions played a vital role in the successful completion of this internship report.

My sincere appreciation also goes to the General Manager Operation Mr. Mahbubur Rashid, who kindly permitted me to work in various departments and helped me understand several operational aspects that were previously unfamiliar to me. His valuable insights and practical explanations significantly enhanced my learning experience.

I would also like to convey my gratitude to the respective department heads who guided and supported me during my internship period — Mr. Shofiq, AGM Production; Mr. Nurul Alam Mina, Head of Human Resources; Mr. Tarikul Islam Rasel, Head of Industrial Engineering; and Mr. Rawnin, Head of Merchandising, Mr. Asraful Manager of Sample room. Their cooperation and willingness to share their professional knowledge helped me gain a deeper understanding of departmental operations and industrial practices.

Finally, I would like to thank all officers, executives, and staff members of Yunusco (BD) Limited for their friendly assistance, encouragement, and cooperation throughout my internship. Their support and collaboration made this learning journey both productive and memorable.

Executive Summary

This report is based on my internship at Yunusco (BD) Limited, a leading lingerie and knitwear manufacturer in Bangladesh. The internship, conducted as part of my Postgraduate Diploma in Knit Industry Management, aimed to enriched my practical understanding of industrial operations. During the attachment period, I worked in five key departments—Industrial Engineering, Production, Sample, CAD and Pattern, Human Resource, and Merchandising—to observe their functions and inter-departmental coordination.

I started my internship from the production department. This is the department where all the things are happened and I found it very interesting. Every day there are new challenges, new target and new solution. In my observation production department continuously going through with the Style closing, Style changeover, On time delivery meet, maintain product quality consistently. My internship experience in the Production Department provided me with valuable practical knowledge about production planning, workflow coordination, operator management, and real-time performance monitoring in a garment's factory environment. It helped me connect theoretical understanding with actual production practices and enhanced my appreciation of teamwork and discipline in a large-scale manufacturing setup. After production department I went to IE department where I saw the the way of SMV calculation, how to calculate CM and how to set the target. This is the team which work for productivity improvement, Efficiency improvement, Minimize skill gap, Process standardization, Kaizen culture practice, Process innovation and automation and skill upgradation. IE play a very important rule to develop a factory and sustainable production system. Middle of the internship I work in sample, CAD and pattern department. This is the department who transform buyer provided concepts, sketches or samples into production ready garments while ensuring technical accuracy, production feasibility. Sample department contain very talented and most experienced and technical person in the organization. After the sample room I move to HR department, throughout my internship in the Human Resource Department, I realized that HR is not only working to recruitment and administrative work; but also, it is a strategic partner in the organization's success. The coordination between HRD, Industrial Engineering, and Production ensures that the company maintains the right balance between workforce efficiency and employee satisfaction. During my internship i was actively involvement in different HR functions which helped me to understand the importance of manpower planning, policy development, performance evaluation, and grievance management. After completing above department, finally I went to the marking and Merchandising department. This is the department who work as a bridge between

factory and buyers. During my internship in the Merchandising Department help me to understand the complete flow of marketing and order management in the apparel industry. This department is often considered the commercial heart of the organization, as it plays an important role in generating business by maintaining close coordination with international buyers, suppliers, and other functional units I realized that the success of any order depends on the strong coordination among all merchandising sub-teams and their collaboration with other departments like Industrial Engineering, Production, and Quality Control.

This report presents the company background, objectives, and tasks accomplished in each department, followed by a critical assessment of organizational strengths and limitations. Overall, the experience strengthened my analytical and managerial skills and provided valuable exposure to real industrial practices within Bangladesh's garment sector.

Keywords: Industrial Engineering; Production Management; Merchandising; Human Resource; Garment Manufacturing; Sample Room; CAD and Pattern;

Table of Content

Declaration.....	ii
Letter of Transmittal	iii
Non-Disclosure Agreement	iv
Acknowledgement	v
Executive Summary	vi
List of Tables	viii
List of Acronyms	x
Chapter 1 Overview of the Yunusco (BD) Limited.....	1
1.1 Overview of the Yunusco (BD) Limited	1
1.2 Vision & Mission of th Yunusco (BD) Limited	1
1.3 Organizatioal Structure, Organogram, Braches of Yunusco (BD) Limited.....	2
1.4 Key Product of the Yunusco (BD) Limited	3
Chapter 2 Description about task accomplishment.....	4
2.1 Production Department	4
2.2 Industrial Engineering Department.....	6
2.3 Sample Room, CAD and Pattern Department	10
2.3.1 CAD and Pattern Department	10
2.3.2 Sample Sewing Section	11
2.4 Human Resourse Department	13
2.5 Marketing and Merchandising Department	15
Chapter 3 Critical assessment of Internship	18
3.1.1 Production Department	18
3.1.2 Industrial Engineering Department	21
3.1.3 Sample Room, CAD and Pattern Department	24
3.1.4 Human Resourse Department	27
3.1.5 Marketing and Merchandising Department	29
3.1.6 Application of Generic and Industry specific courses during internship]	31
3.2 Learning for self improvement	32
Chapter 4 Conclusion	34
References.....	35
Appendix A.....	35

List of Tables

Table 1: Daily Production Report	3
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List of Acronyms

AQL	- Acceptable Quality Level
AGM	- Assistant General Manager
BOM	- Bill of Materials
CAD	- Computer-Aided Design
CM	- Cost of Manufacturing
CPM	- Cost Per Minute
DHU	- Defect Per Hundred Unit
ERP	- Enterprise Resource Planning
EPM	- Earn Per Minute
GM	- General Manager
HRM	- Human Resource Management
IE	- Industrial Engineering
KPI	- Key Performance Indicator
MTO	- Management Trainee Officer
OB	- Operation Bulletin
OTD	- On Time Delivery
PO	- Purchase Order
PPE	- Personal Protective Equipment
PPM	- Pre - Production Meeting
QA	- Quality Assurance
QC	- Quality Control
QMS	- Quality Management System
RMG	- Ready-Made Garments
RPM	- Rotation Per Machine
SMV	- Standard Minute Value
SOP	- Standard Operating Procedure
SPI	-Stitch Per Inch
TPM	- Total Productive Maintenance

Chapter 1: Overview of Yunusco (BD) Limited

1.1 Overview of Yunusco BD Limited

Yunusco (BD) Limited is a leading undergarments company in Bangladesh, operating as a sister concern of Yunusco Group. It was set up at 2013 and located in Adamjee EPZ, Shiddirgong, Narayangonj, Bangladesh. The company is engaged in production of knitwear and intimate apparel, including underwear and lingerie with strong focus on export to international markets (Company website, n.d.).

With over a decade of experience, Yunusco has built capacity across the full value chain, including fabric knitting and dyeing, elastic and sewing thread production, all over printing and accessories such as label and trims. This integration help Yunusco to control of quality, shorter lead times and competitive pricing for international buyers.

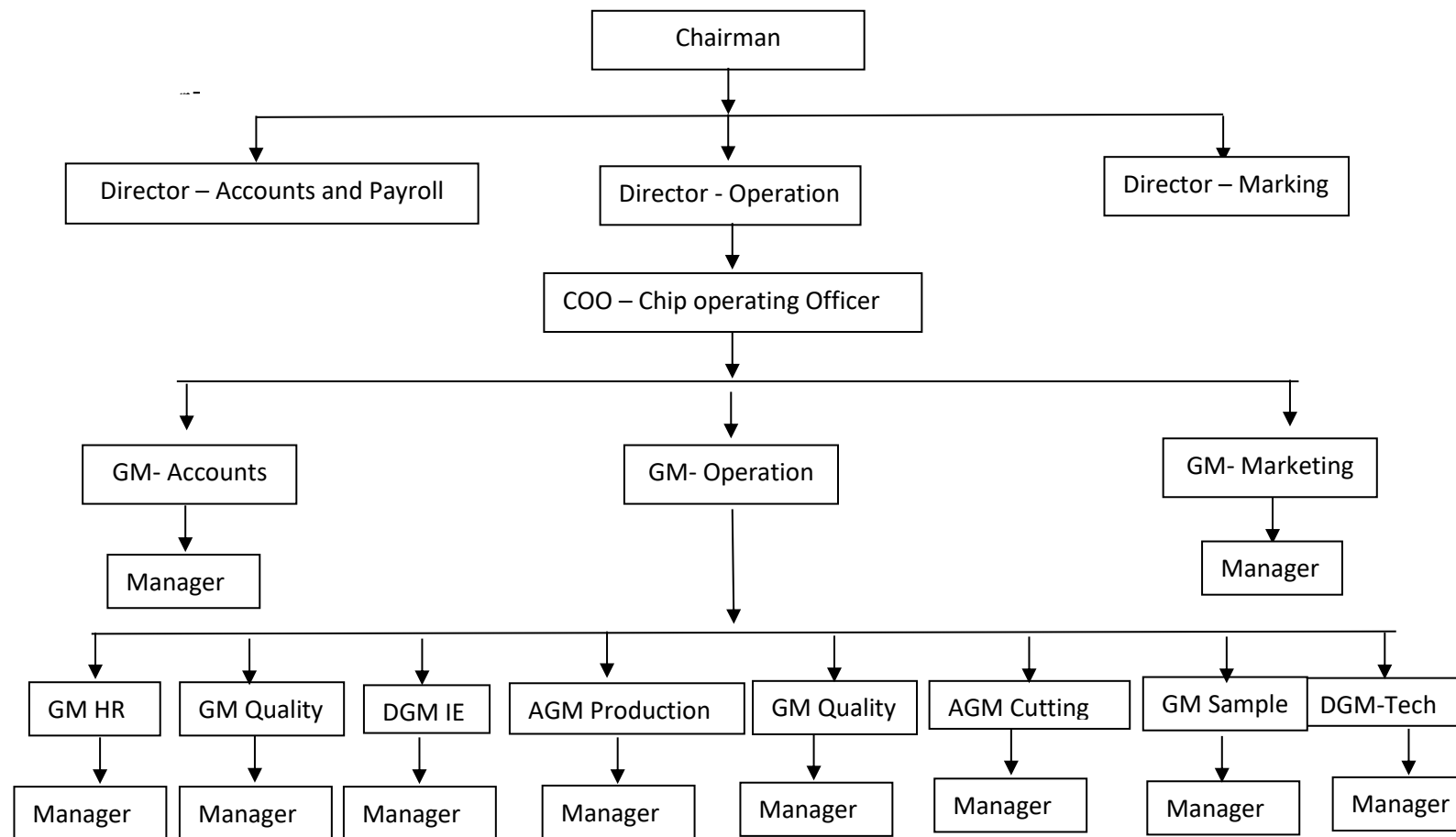
1.2 Vision, Mission and Motto of Yunusco BD Limited

The company's vision is "To become a premier and prominent undergarment manufacturer in the country". Its mission is "To be one of the top three exclusive manufacturers of undergarments, not peruse in production but in quality." In addition, the company has a motto of being excellence in what it does, and it strives to continually improve (Company website, n.d.).

1.3 Organizational structure, Organogram, Branches and departments

The organization is headed by a Chairman who provides overall strategic direction. Below the Chairman there are three Directors who are responsible for separate functional areas of the business: marketing and merchandising, accounts and payroll, and production and operations. A Chief Operating Officer acts as the link between the Directors and the factory functions, coordinating all major departments including operations, marketing and accounts. Reporting to the Chief Operating Officer are the General Managers, Deputy General Managers and Assistant General Managers who head the respective departments. Beneath each department head there are Managers and Assistant Managers who work directly with Officers and Senior Officers to carry out day-to-day activities. This hierarchical structure enables clear lines of communication from top management to operational staff and supports effective implementation of policies and targets across the organization. The organogram of the company is given in Figure 1.

Figure 1: Organogram of Yunusco (BD) Limited



Source: Author

1.4 Key Products of the Company

Since its operations in 2013 Yunusco (BD) Limited has grown into a versatile manufacturer with a broad product portfolio. The company's key items are lingerie products such as bras and panties, while men's underwear and basic T-shirts also form an important part of its production. At present the factory is undergoing a transition period focused on product diversification. In addition to its established product lines, it is now seeking to capture the heavy-knit market and has started developing products such as shorts, hoodies, sweatshirts and joggers. The company supplies a range of leading international retailers and brands, with its main customers including Wolf, H&M, Primark, Cubus, Walmart, Allen Solly and Etc. The company's product categories and monthly production capacity are given in Table 1.

Table 1: Monthly production of Yunusco (BD) Limited

Product Category	Production Pcs
Bra	1Million
Brief	2.5 Million
Man's Underwear	0.75 Million
T-shirt	0.35 Million
Total	4.65 Million

Source: Company's Daily Production Report

Chapter 2: Description of Task Accomplishment

During my internship at Yunusco (BD) Limited, I had the opportunity to work across five important departments of the organization, which allowed me to gain a next level of understanding of the operational, managerial, and commercial activities of a modern garment industry. The internship period covered total of sixty-six days, during which I was assigned to different departments in a rotational manner. I spent twelve days in the Industrial Engineering (IE) Department, twelve days in the Production Department, twelve days in the HR and Compliance Department, eighteen days in the Merchandising Department, and twelve days in the CAD, Pattern, and Sample Section. This rotation help me with practical exposure to various functional areas—ranging from planning and efficiency improvement to product development, costing, employee management, and buyer communication. Through this structured internship program, I was able to connect theoretical knowledge from my academic courses with the practical practices of the apparel industry.

2.1 Production Department

During my internship at Yunusco (BD) Limited, I was assigned to the Production Department for twelve days. Throughout this period, I was supervised by the Assistant General Manager (AGM), the Production Manager (PM), and one-line supervisor, who provided continuous guidance and support to help me understand the practical operations of the production floor. My assigned workstation was in the C Section, where I closely observed and learned the overall production process of the factory. The C Section consists of eleven production lines and is dedicated primarily to bra production, although Yunusco (BD) Limited manufactures a wide range of products. Each line contains twenty-eight machines, and the line layout is arranged to ensure smooth workflow. In front of each machine, there are two tables—one for thread trimming and another for quality checking. Every line has one input rack to store the fresh input materials before they are processed. Typically, one line consists of twenty-eight operators, two helpers, one inline QC, and one output QC. To collect input materials from the cutting and store sections, one line leader is allocated for each line, and every line is supervised by one line supervisor. The entire section is managed by a team that includes two Production Officers, one Industrial Engineer (IE), one QC Officer, and two Technicians, all under the supervision of the Production Manager (PM).

During my internship, I observed how the production team works according to the daily plans received from the Planning Department. I learned how materials are collected from the store before starting a

new style and how the line is changed over when production shifts from one style to another. I also observed how operators are allocated to different workstations during changeover periods based on skill and requirement. The production team receives daily and hourly targets from the Industrial Engineering (IE) Department, and I observed how the line leaders and supervisors continuously monitor performance to achieve these targets.

I also witnessed the challenges faced by the production team, especially during style closing, when material shortages sometimes create production delays. Despite these difficulties, I noticed their continuous effort to maintain productivity and quality standards. Every hour, the supervisors checked and recorded production output to monitor progress against the target. This practice helped me understand how production tracking and quality maintenance are carried out simultaneously to ensure smooth operations.

The production process in the C Section of Yunusco (BD) Limited follows a well-organized sequence of activities that ensures smooth workflow and quality control at every stage. The process begins with receiving the production plan from the Planning Department, followed by collecting the Bill of Materials (BOM) sheet from the Production Recorder Room. A production token is then obtained from the Cutting Section, which authorizes the team to collect input materials. The input fabrics are collected from the Cutting Section and the required accessories are received from the Store. The Industrial Engineering (IE) Department provides the layout and Operation Bulletin (OB), based on which the Maintenance Team sets up the machines according to the required layout. The Sample Room then provides the approved sample and the technical file for reference. Before starting bulk production, the technician trains the operators on the new style during the line feeding process. Once the initial setup is completed, a mock-up is produced and checked by the Inline QC for approval. After the mock-up is passed, operators begin full-scale production while maintaining the required quality standards. Every garment piece goes through a Quality Control (QC) check. If the product passes, it is transferred to the Packing Section for finishing and shipment. If it fails, it is returned to the operators for repair or rework until it meets the quality standard. Production flow chart of Section C is provided below.

Production Process Flow Chart (C Section – Yunusco BD Limited)

Get plan from Planning Department → Receive BOM sheet from Production Recorder Room → Get production token from Cutting Section → Collect input materials from Cutting → Collect accessories from Store → Receive layout and Operation Bulletin (OB) from IE Department → Maintenance Team set the machines as per IE layout → Collect approved sample and technical file from Sample Room → Technician trains operators about styling during line feeding → Mock-up checked and approved by

Inline QC → Operators start production and produce garments → Quality Control (QC) Check → If pass → Transfer to Packing Section → If fail → Return to Operators for repair/rework.

Overall, my internship experience in the Production Department provided me with valuable practical knowledge about production planning, workflow coordination, operator management, and real-time performance monitoring in a garment's factory environment. It helped me connect theoretical understanding with actual production practices and enhanced my appreciation of teamwork and discipline in a large-scale manufacturing setup.

2.2 Industrial Engineering Department

During my internship at Yunusco (BD) Limited, I was assigned to the Industrial Engineering (IE) Department for eighteen days. Throughout this period, I was supervised by the Deputy General Manager (DGM), IE Manager, and IE Senior Officer, who provided continuous guidance and support to help me understand the practical operations and strategic functions of the department.

My assigned workstation was with the IE Costing Team and the Floor IE team working in Section D and Section B. I closely observed their way of working and learned about the overall IE process, including how the department collaborates with other divisions such as Production, Planning, and Marketing.

The IE Department is headed by one Deputy General Manager (DGM), who leads all strategic decisions related to business growth, productivity improvement, and optimization of overall industrial engineering functions. The DGM acts as a bridge between top management and IE operations, ensuring maximum efficiency, cost control, and productivity across all sections.

Under the DGM, there is one Assistant General Manager (AGM), who serves as the second-in-command of the department. The AGM leads the IE operation team consisting of the IE Manager, Senior Executives, and Executives. Each IE Manager supervises three sections, and every section has one assigned IE responsible for line performance, Capacity build up, Optimum Capacity utilization, Skill matrix upgradation, Skill balancing, Skill hired, Quick change over, manpower planning, and process combined, Process improvement and process development.

There is also a Costing Team within the department that ensures accurate CM (Cost of Making) calculation by providing SMV (Standard Minute Value) to the Marketing Team and preparing layouts for the production floor. Costing IE team contain one deputy manager and one Sr Executive who are directly reported and guided by IE DGM.

The process of the Costing IE team can be summarized as follows:

Get sketch/picture from Marketing Team → Prepare Operation Bulletin (OB) and provide SMV with approximate efficiency → Receive PCD from Planning Department → Prepared balanced layout for production ensuring optimum use of man, machine, and method → Standardize processes and record them.

In the IE Department of Yunusco (BD) Limited, the Costing Team plays a vital role in supporting marketing and production decision-making. Their work begins when they receive a sketch, picture, or sometimes a physical sample from the buyer through the Marketing Team. Based on this input, they prepare an Operation Breakdown (OB) by identifying each operation involved in the style and assigning Standard Minute Values (SMV) to every process. After all process SMVs are calculated, the total SMV for the style is determined, which is referred to as the Style SMV. This Style SMV is then provided to the Marketing Team along with a forecasted efficiency. To forecast efficiency accurately, the costing team collects information about the approximate order quantity and lead time for that specific style. The predicted efficiency is then derived using Yunusco's internal learning curve system, which reflects the factory's practical performance trends for similar product categories.

The Learning Curve is one of the most important and interesting tools used by the IE Department. It helps the factory plan production targets, allocate manpower, and utilize capacity effectively to achieved on time delivery. Yunusco categorizes its core products based on style complexity and machine requirements, allowing better control over planning and performance measurement. For bra production, the company follows three categories of learning curves known as B1, B2, and B3. The B1 category refers to basic bra styles with an SMV range between 3 to 6, the B2 category includes foam cup, push-up, and padded bra styles with an SMV range between 7 to 12, while the B3 category refers to cut and sew or wired bra styles with an SMV range above 11. Each category has its own learning curve behavior depending on the complexity of the style and operation. When a line shifts from B1 to B1, meaning from one basic bra to another, the line typically requires three days of learning to reach its peak efficiency target. On the other hand, when a line changes from B1 to another category such as B2 or B3, the line is given a seven-day learning curve to achieve the pack targeted efficiency, as the new style involves different operations, machines, and skill levels.

Similarly, for panty production, there are five categories named P1, P2, P3, P4, and P5, each defined by differences in styling and machine requirements. For men's boxer production, there are two categories known as M1 and M2. For knit and heavy knit items, the learning curve system includes five categories named HK1, HK2, HK3, HK4, and HK5. Each category has its unique identification

based on garment construction, machine type, and technical difficulty. This classification helps the IE Department plan new style introductions more accurately, allocate operators according to skill level, and estimate the production learning time more precisely. By applying this structured learning curve and product categorization system, Yunusco (BD) Limited ensures continuous improvement in productivity, faster style stabilization, and optimal utilization of resources across its production lines.

Additionally, Coting IE team provides thread consumption to the Marketing Department for booking. After marketing SMV and thread consumption they do another important thing which is prepared operation bulletin and make layout for production floor. From my point of view operation bulletin is very interesting thing and informative documents I ever seen in production floor. Where they write every operation of a style with machine, SMV, Target. On the OB they provide process wise individual target and allocated manpower to achieve the line target. On the summary of OB, they mention total manpower and machine required for the particular style. In the floor OB is treated like a Bible. Technicians follow OB for during line feeding they replicate this paper instruction on the floor. They set the machine and sequence the operation as per OB. And supervisor takes individual process target from the OB and drives to achieve target. Production Managers and IE drive to achieve style target efficiency and production pcs. The details of one OB are presented in Figure 2.

The costing IE team also involved in sampling during sample development to make sample production friendly and simplify the operation.

The department also has two reporters who prepare several analytical reports for management, including IE Flash Report, Costing Report, Style Analysis Report, WIP Report, Finishing Efficiency Report and Feeding Report.

Each production section has one IE Executive, whose primary responsibilities include ensuring maximum capacity and efficiency, process standardization, promoting Kaizen practices, identifying skill gaps, and conducting skill training. The Floor IE team ensures Quick Change Over (QCO) by preparing manpower allocation three days before line feeding, presetting external machines, and providing operator training for critical operations after 5 PM.

Figure 2: Details of one OB



Operation Break Down

Buyer	Primark	Fabric Type	Cotton	Working Hours	10.00	100%	3453
Style	Miami Thong	Order Qty	50000	Man Power	20	80%	345
Style No	N/A	Sample Size	L	Helper	0	Prepared By	IE TEAM
Item	Panty	SMV	2.78	Total	20	Prepared Date	Friday, October 17, 2025

S.No	Operation Name	Mc Type	SMV	AL Loading	Actual Loading	Target 100%	Target 80%	Needle Type	Folders/ Attachment	RPM	Remarks
1	Overlock gusset lining	3T OL	0.12	0.9	1	500	400			4000	
2	Join back gusset	4T OL	0.24	1.7	2	500	400			4000	
3	Gusset side tack	SNLS	0.22	1.6	2	545	436			3600	
4	Label make	SNLS	0.15	1.1	1	400	320			3000	
5	Join both sideseam - Insert label	4T OL	0.30	2.2	2	400	320			4000	
6	Attach elastic at leg	3T Cut Re-enter	0.42	3.0	3	429	343			4000	
7	Topstitch elastic at leg	3T FL-TS	0.35	2.5	2.5	429	343			4600	
8	Attach elastic at waist	3T Cut Re-enter	0.30	2.2	2	400	320			4000	
9	Topstitch elastic at waist	3T FL-TS	0.22	1.6	1.5	409	327			4000	
10	V-tack at CF & CB	SNLS	0.20	1.4	1.5	450	360			3200	
11	Attach woven label at Front (follow measurement)	SNLS	0.20	1.4	1.5	450	360			3200	
Total			2.78	20	20	447	357				

Sample Image





Machine Summary

Machine type	M/c qty	Machine type	M/c qty
SNLS	6	3T OL-Cut & Re enter	0
SNEC	0	3T FL Hem	0
Zig Zag	0	2T FL-TS	0
DNLS	0	6T FL-TS	0
DNCS	0	3T FL-TS	4
3T Cut Re-enter	5	FL-RSC	0
3T OL	1	FL CB Pulier	0
4T OL	4	Manual	0
2TFL-Binding	0	Flat seam	0
3T FL-Binding	0	Bartack	0
TOTAL		20	

Target

Efficiency	Hourly tgt	10 hr's tgt
100%	432	4317
90%	388	3885
80%	345	3453
75%	324	3237
70%	302	3022
65%	281	2806
60%	259	2590
55%	237	2374
50%	216	2158
45%	194	1942
40%	173	1727

Source: IE OB and Layout archive

Section responsible IE started his work from very first morning of the day by counting absenteeism and balance the line from inside or outside line. IE department has their internal skill matrix of all operators in factory. Which help them to know the skill available and skill gap. After morning balancing they prepared section target to follow factory internal learning curve and handover it to section PM. Then they attend production forecast meeting with AGM, PM along with section In charge. During the forecast meeting section PM share his difficulty or challenge to achieve days target. Section IE take the notes and take in charge to solve this challenge.

To overcome every challenges section IE performs capacity studies through 5-cycle checks to identify bottlenecks and analyze. Once bottlenecks are identified, they use the Fishbone Diagram method, which focuses on the 4Ms — Man, Machine, Material, and Method — to find and address the root

causes. This activity is known as a Production Study. Before conducting the study, they properly arrange workstations and panels to ensure low motion economy. The study duration usually half an hour to one hour.

The IE Department also plays a key role in recruitment and assessment of new operators. They evaluate operator skills, update the Skill Matrix, and continuously monitor progress. Moreover, IE personnel participate in multiple meetings such as Pre-Production (PP) Meetings, Forecast Meetings, Target Achievement Meetings, and Line Feeding Pocket Meetings to align operational activities with the company's strategic goals.

This is the team which work for productivity improvement, Efficiency improvement, Minimize skill gap, Process standardization, Kaizen culture practice, Process innovation and automation and skill upgradation. IE play a very important rule to develop a factory and sustainable production system.

2.3 Sample and Product Development Department

During my internship at Yunusco (BD) Limited, I also had the opportunity to enrich my knowledge about the activities of the sample and product development department for twelve days. This department plays a very important rule in the entire manufacturing process, as it bridges the buyer's design requirement with the factory's production capability. Sample department is responsible for transforming buyer provided concepts, sketches or samples into production ready garments while ensuring technical accuracy, aesthetic appeal and production feasibility.

The sample and product development of Yunusco (BD) Limited is headed by a General Manager who is supported by at three managers, a team of merchandisers, Technical designers, Pattern Masters, Sample technician, sample operators, and Sample quality assurance. Sample department consist of two sub department namely, CAD and pattern, and sample sewing section.

2.3.1 CAD and Pattern department

The CAD and Pattern Team of Yunusco (BD) Limited plays a vital role in ensuring accuracy, consistency, and efficiency in the sample and production development process. This team operates as a part of the Sample and Product Development Department and works closely with the technical, merchandising, and IE departments to transform buyer-provided designs or technical packs into production-ready patterns that can be efficiently executed on the production floor. CAD and Pattern team lead by a manager with five executives, this team directly report to GM sample.

The pattern development process begins after receiving the Tech Pack or sample from the buyer. The pattern master who also can operate CAT software check all the technical instruction and guidelines,

including measurement charts, garment construction, fabric combination and type of the fabric, and buyer quality standard. After understanding the buyer instruction, they prepared the pattern using garber software. This software allows the team to create accurate digital patterns, make necessary grading for different sizes, and adjust any fitting issues efficiently and effectively.

Once the sample size pattern its also called based pattern is created, the patterner handover the pattern to cutting to for a trial cutting and sends the panels to the sample section for stitching. In the development stage, the pattern maker collaborates with the sample technician and IE team to ensure that the construction method is production-friendly and that fabric consumption is optimized. If any fitting or measurement discrepancies are found after the first sample, sample technician suggest to revises the pattern accordingly and rechecks until the final fit is approved by the buyer.

The Garver cad software also plays a important role in marker making, which helps in optimized fabric uses and controlling cost. The team creates markers with this software, following the fabric width and cutting plan, and sends them to the cutting department for bulk cutting. A good marker efficiency directly contributes to cost minimization, which is one of the key performance indicators of this CAD and Pattern team.

The pattern team maintains all approved soft pattern in a digital archive, ensuring proper documentation and easy reference for repeat orders or similar styles. This digital library also helps in maintaining pattern consistency, reducing development time for future styles, and improving communication between the Sample, IE, Production departments and also buyers.

Through my observation, I learned that the CAD and Pattern Team is one of the most technically sound and experienced departments in the factory. Their experience and coordination ensure that every sample is not only aesthetically correct but also technically and economically feasible for bulk production. The work of this team directly impacts production efficiency, fabric consumption, and overall product quality, and the overall cost of product.

2.3.2 Sample Sewing Section

The Sample Sewing Section of Yunusco (BD) Limited is another important part of the Sample and Product Development Department. This section is responsible for making patterns and designs into physical garments that represent the buyer's concept, instruction, guidelines, expectation and factory's capability. It serves as the practical ground where creative ideas, technical specifications, and industrial processes come together to produce development samples, quotation sample, fit samples, and pre-production samples for buyer approval.

The section is led by two sample managers under the supervision of the Sample GM, and consists of a group of highly skilled and experienced sewing operators, helpers, and quality checkers. Unlike the bulk production lines, the sample section running with a smaller team such as Team A,B,C,D,E,F but with a higher level of technical knowledge. Each team contains 7/8 operators. Each operator in this section is multiskilled to handle multiple machines and operations, as the styles developed here often involve frequent style change and various construction techniques.

Once the Pattern Team provides the develop pattern and the cutting team prepares the required panels, the sample pieces are handed over to the Sample Sewing Section. Before starting sewing, the Technical Designer and IE representative brief the team about the operation sequence, critical construction points, and machine requirements, Measurement and buyer standard and the allowances of every joining seam. During stitching, the operators follow the article description of OB to ensure that the sample meets both design and the buyer's standards.

The Sample Sewing Section is equipped with different types of sewing machines, such as, Single Needle lockstitch, Double needle lockstitch, overlock, flatlock, zigzag, bar-tack, and cover stitch, depending on the product type. The sample room also divided by two sections. One lingerie's sample room for lingerie items like bras, panties, and another section call heavy knit sample section for knit item such as t-shirt, hoody and shouts and sweat shirts. This section also uses specialized machines such as flat seamers, Kansai, feed of the arm, Left side cutter and bonding machines. The availability of these machines allows the sample section to replicate buyer requirements more accurately during the development stage.

During the sample sewing the inline quality inspector checks each operation as part of quality assurance. Although sample operators are following all the guidelines, Measurements and instruction quality inspector ensure and re confirm all the measurement accuracy, following all the guidelines and allowance so that it fit wall on buyer model. If any deviation or defect is identified, the sample is immediately sent back for correction before submission. Once the sewing is completed and the sample passes the internal quality check, it is pressed, trimmed, and sent to the Product Development Team for buyer submission.

The Sample Sewing Section also plays an important role in supporting the IE Department and production team before bulk production started. The IE team often conducts operation analysis and machine requirement studies in this section to finalize the operation bulletin (OB) and layout for production. Through this close coordination, the sample section not only helps to visualize the final product but also ensures that the style is technically and operationally ready for bulk manufacturing. From my observation, I found the Sample Sewing Section to be a highly skilled and detail-oriented unit that directly reflects the technical capability of Yunusco (BD) Limited. Their work ensures that

every new style developed in the factory maintains the buyer's design integrity while being feasible for large-scale production.

2.4 Department of Human Resource Management

During my internship at Yunusco (BD) Ltd., I was assigned to the Human Resource Department (HRD) for 12 Days, which plays a important role in managing one of the most important resources of the organization—the manpower. The HR Department of Yunusco (BD) Ltd. operates as a central unit responsible for managing human capital efficiently and aligning employee performance with the organization's strategic objectives. The department is divided into several functional areas such as recruitment and selection, training and development, performance appraisal, disciplinary management, and employee welfare. My internship experience in this department allowed me to observe and participate in various HR functions, which enriched my understanding of human resource practices in a greater scale of industrial setup.

The HR Department of Yunusco (BD) Ltd. is led by the Head of Human Resources Designated by AGM, under whom a team of sr. managers, managers, sr. executives, executives, and welfare officers work collaboratively. Their goal is to maintain a productive, motivated, and compliant workforce while ensuring the well-being of all employees. During my time in this department, I had the opportunity to participate in daily HR activities, assist in data management, observe disciplinary procedures, and attended to training and development programs. These experiences helped me bridge the gap between theoretical knowledge and real implementation in an organizational environment.

One of my initial areas of involvement was in the recruitment and selection process. This process begins with manpower planning, which is conducted by the HR Head in coordination with the Industrial Engineering and Production departments. The planning phase identifies the number of workers, staff, and officers required based on upcoming orders and production forecasts. I was assigned to assist in collecting and compiling manpower data from the IE department, which was later used to prepare the recruitment proposal. Once the proposal was approved by top management, I helped in drafting internal job circulars, posting online advertisements, and organizing walk-in interviews. The selection process includes several steps such as application screening, written examinations, skill tests, viva voce, and medical check-ups. I observed that Yunusco (BD) Ltd. maintains strict compliance with labor laws and BEPZA regulations throughout the recruitment process. After the selection, I involved in the joining formalities, document verification, and induction programs for newly appointed employees. The induction program provides essential orientation about company policies, safety rules, attendance systems, and work ethics.

Apart from recruitment activities, I also get valuable experience in the training and development section. Yunusco (BD) Ltd. places strong emphasis on employee skill improvement and continuous learning. I was actively involved in the preparation of the yearly training calendar, which is based on the Training Need Assessment (TNA). The TNA is conducted through performance appraisal reviews, departmental feedback, and production analysis. Based on the identified needs, training sessions are organized for different levels of employees including operators, supervisors, and executives. I participated in the preparation of training modules and observed various types of programs such as Helper to Operator skill development, Quality Inspector training, leadership development, and compliance awareness. Both on-the-job and off-the-job training methods are practiced in the organization. On-the-job training helps workers acquire technical skills directly at the workstation, while off-the-job sessions include classroom discussions, audiovisual presentations, and case studies. I also learned that YBDL follows the Kirkpatrick Model to evaluate the effectiveness of training programs through four stages: reaction, learning, behavior, and results. Through my involvement in these activities, I realized how structured training and systematic evaluation help to improve overall employee performance and reduce operational inefficiencies.

Performance appraisal is another important function of the HR Department that I closely observed during my internship. The organization follows two types of appraisal systems: a confirmation appraisal conducted after six months of employment and a yearly performance appraisal for all confirmed employees. The appraisal process is jointly managed by the COO, Department Head, and HR Head. Evaluation criteria include job knowledge, attendance, productivity, discipline, teamwork, and behavioral aspects. I had the opportunity to assist in collecting appraisal forms, tabulating scores, and see summary reports for management review. Based on these evaluations, employees may receive promotions, salary increments, or performance-based recognition. I noticed that the organization is gradually adopting a data-driven approach to performance management, where objective key performance indicators (KPIs) are increasingly emphasized to ensure transparency and fairness.

Another important learning area for me was the disciplinary management system. The HR Department plays a key role in maintaining discipline and ensuring a harmonious working environment. During my internship, I observed several cases where the department dealt with issues such as absenteeism, misconduct, and violation of company rules. The HR team follows the Bangladesh Labor Act 2006 and BEPZA Labor Rules 2022 while taking disciplinary actions. Each case is handled with proper documentation, show-cause notices, and hearings before any decision is finalized. Depending on the severity of the misconduct, actions may include warnings, fines, suspensions, or even termination. I also observed the counseling process conducted by welfare officers, who try to solve behavioral and attendance issues through discussion before applying formal punishment. These experiences gave me

a practical understanding of how an organization maintains discipline while ensuring fairness and compliance with labor regulations.

In addition to these activities, I worked closely with the employee welfare team, which is an integral part of the HR Department. The welfare officers are responsible for maintaining worker satisfaction and ensuring safe and healthy working conditions. They regularly monitor absenteeism, manage maternity benefits, and provide counseling to workers regarding personal or professional issues. I assisted in recording leave applications, maintaining welfare registers, and following up on maternity cases. The welfare team also coordinates with various committees such as the Worker Participation Committee, Grievance Committee, Canteen Committee, Safety Committee, and Harassment Prevention Committee. I found that these committees are essential in promoting transparency, trust, and a positive workplace culture. Through these experiences, I learned how employee welfare contributes not only to compliance but also to higher retention and motivation.

Throughout my internship in the Human Resource Department, I realized that HR is not limited to recruitment and administrative work; rather, it is a strategic partner in the organization's success. The coordination between HRD, Industrial Engineering, and Production ensures that the company maintains the right balance between workforce efficiency and employee satisfaction. My active involvement in different HR functions helped me to understand the importance of manpower planning, policy development, performance evaluation, and grievance management. The exposure I gained in this department enhanced my professional knowledge and equipped me with practical skills necessary for managing people in an industrial environment. It also provided me with a clear understanding of how human resource practices influence productivity, efficiency, and organizational sustainability.

2.5 Merchandising and Marketing Department

During my internship at Yunusco (BD) Limited, I was assigned to the Merchandising Department for twelve days. This department is often considered the commercial heart of the organization, as it plays an important role in generating business by maintaining close coordination with international buyers, suppliers, and other functional units. It serves as a bridge between the factory and external stakeholders to ensure that all marketing, product development, and order execution activities are conducted smoothly and effectively. My time in this department provided me with valuable insights into how a merchandising team functions within a large garment manufacturing setup and how they contribute to the overall business growth of the company.

The Merchandising Department of Yunusco (BD) Limited is organized into four major functional areas: Product Development, Costing, Procurement, and Bulk Merchandising. Each section works under the guidance of the General Manager (GM) and is supported by Senior Managers, Managers,

Senior Executives, Executives, and Management Trainee Officers (MTOs). All teams work collaboratively to meet buyer requirements, negotiate costs, and ensure timely delivery of orders.

During my internship, I closely observed the Product Development Team, which is primarily responsible for understanding buyer requirements and developing new styles. The team receives the tech pack and design specifications from buyers, which include detailed information about fabric, color, trims, size, and garment construction. Based on these inputs, the development team coordinates with the Sample Room, Fabric Department, and Trims Store to prepare development samples for buyer approval. Once the samples are made, they are sent to the buyer for comments or approval. I learned that this stage is crucial, as a well-developed sample increases the possibility of securing bulk orders. The team also collaborates with the Industrial Engineering and Production departments to ensure that the design is technically feasible and can be efficiently produced in bulk.

The Costing Team plays a vital role in determining the price of each garment. After receiving an inquiry or sample confirmation from the buyer, the team collects the Bill of Materials (BOM) and calculates the cost of fabric, trims, accessories, labor, overhead, and other related expenses. They prepare the Standard Minute Value (SMV) and efficiency data in coordination with the Industrial Engineering (IE) Department to determine accurate cost estimates. I observed how merchandisers compare the internal cost with the target price offered by buyers and then negotiate accordingly. This process helped me understand the importance of cost control, negotiation skills, and profit margin planning in a competitive global market.

The Procurement Team is responsible for sourcing and purchasing the raw materials required for production while also maintaining internal inventory checks. Once an order is confirmed, this team issues purchase orders (POs) to approved suppliers and coordinates with the Store and Commercial Departments to ensure the timely arrival of materials. I learned how they manage lead times and follow up with suppliers to minimize any delay that might affect production. The procurement officers also ensure that all raw materials meet the quality and compliance standards set by the buyers. I found this section to be well-organized and systematic, as every item received was documented, tracked, and cross-checked with the original purchase order and quality reports. This team also collaborates with suppliers to develop new materials and conducts all required testing to meet buyer requirements. However, during my internship, some merchandisers shared one limitation: the factory's ERP system was not fully functional, which sometimes led to incomplete information about stock inventory. Due to this limitation, there were instances of overstocking and inefficient inventory control.

Finally, I observed the Bulk Merchandising Team, which handles all activities related to production follow-up, shipment coordination, and buyer communication once the order is confirmed. The bulk merchandisers act as a link between the buyer and the factory's internal departments, such as Planning,

Production, Quality, and Commercial. They track daily production progress, resolve issues that arise during sewing or finishing, and keep the buyer updated through regular communication and production reports. I learned how essential it is for merchandisers to be proactive, detail-oriented, and responsive to maintain buyer trust and ensure on-time delivery. During my internship, I also noticed that the bulk team constantly monitors key performance indicators (KPIs) such as on-time shipment rate, quality performance, lead time adherence, and cut-to-ship ratio.

Overall, my internship experience in the Merchandising Department allowed me to understand the complete flow of marketing and order management in the apparel industry. I realized that the success of any order depends on the strong coordination among all merchandising sub-teams and their collaboration with other departments like Industrial Engineering, Production, and Quality Control. This experience enhanced my understanding of the business cycle—from receiving a buyer's inquiry to the final shipment—and helped me appreciate the complex yet systematic nature of merchandising operations in a large-scale garment factory.

Chapter 3: Critical Assessment of Internship Work

In this chapter, I provide my critical assessment of internship work with various departments elaborated in the previous chapter. This assessment combines of strengths, weaknesses and suggestions for improvement.

3.1 Critical assessment of various departments

3.1.1 Production Department

The internship experience in the Production Department of Yunusco (BD) Limited offered valuable exposure to the practical management and workflow of a large-scale apparel manufacturing facility. The training period, from September 6 to September 18, provided the opportunity to observe how a production floor operates in coordination with other functional areas such as Planning, Industrial Engineering (IE), and Quality Assurance. This section presents a critical evaluation of the key strengths, challenges, and potential improvements identified during this period.

Strengths of the Production Department

A major strength of the Production Department lies in its well-structured operational system and disciplined workflow. Each activity in the production process followed a clear sequence—from receiving the daily plan from the Planning Department to conducting final quality inspections and transferring finished goods to the Packing Section. This systematic flow minimized confusion, ensured accountability, and maintained consistent coordination among all related units.

Another strong aspect observed was the high level of teamwork and cooperation across the department. The Production Manager, line supervisors, line leaders, operators, and other support personnel worked collaboratively under the direct supervision of the Assistant General Manager (AGM) and the Production Manager (PM). Their leadership approach emphasized close monitoring and quick decision-making, which helped sustain productivity and discipline throughout the floor.

Regular performance monitoring also stood out as a major strength. Supervisors routinely tracked hourly production against assigned targets, while the IE Department provided technical assistance through target sheets and efficiency reports. This real-time evaluation process allowed early detection of bottlenecks and supported quick corrective actions. Additionally, the department maintained a

strong focus on quality, with both inline and output quality controllers ensuring that defective garments were identified and corrected immediately.

The department's emphasis on training and knowledge sharing further contributed to its effectiveness. Before introducing a new style, technicians and supervisors trained operators on the specific sewing methods and construction details. This proactive learning approach minimized operational errors, improved operator adaptability, and increased overall production readiness. Collaboration among the Production, IE, and Maintenance teams ensured that every line setup was properly executed before bulk production began.

Challenges and Weaknesses Observed

Despite its organized structure, the Production Department faced several challenges that occasionally disrupted its efficiency. One of the most frequent issues was unplanned absenteeism among operators. When workers were absent without advance notice, it became difficult for the Production and IE teams to balance lines for smooth production flow. Since garment operations are interdependent, even a single missing operator could create a bottleneck, slowing down the entire production flow. While planned absenteeism could be managed through backup allocations, unplanned absenteeism significantly decreased line efficiency and got behind to achieve on time delivery. This situation indicated the need for a more proactive attendance management and manpower backup system.

Material shortages also created issues, particularly during style changeovers or style closing. These shortages generally resulted from delays in coordination between the Store, Cutting, and Planning departments. When materials or trims were not delivered on time, operators were forced to remain idle, increasing non-productive time and efficiency dropped.

Another concern was the variation in operator skill levels. Despite supervisors' efforts to assign tasks according to capability, some skill mismatches occurred, resulting in rework, quality issues, and slower production. The heavy reliance on a few experienced operators also created vulnerabilities, especially when these workers were absent or reassigned.

Additionally, certain aspects of the physical layout caused minor inefficiencies. Movement of materials around the input and output table during busy hours sometimes created congestion, affecting workflow speed. Supervisors were also burdened with multiple responsibilities such as output tracking, quality checks, manpower allocation, and communication with other departments, which occasionally limited their focus on problem-solving and preventive measures.

Suggestions for Improvement

Several improvements could be introduced to enhance production performance and reduce operational disruptions.

First, the introduction of a digital attendance monitoring system linked with manpower allocation software would help track absenteeism trends and allow faster line rebalancing using available floaters or multi-skilled operators. Implementing cross-training and skill rotation programs would also reduce dependency on specific individuals and improve workforce flexibility.

Second, coordination between the Planning, Cutting, and Store departments can be strengthened through digital communication tools or shared dashboards. Real-time visibility of material availability and cutting status would minimize delays and idle time during changeovers.

Moreover, rearranging workstation layouts to improve workflow and operator comfort would reduce unnecessary movement and enhance productivity. The use of visual management tools such as floor markings, color-coded racks, and workflow charts can further improve workplace organization. Supervisors should be equipped with simple digital dashboards to track line performance, which would reduce paperwork and allow them to focus more on quality and efficiency improvement.

Finally, conducting a short daily coordination meeting among the IE, Production, and Maintenance teams before each shift could align everyone with manpower availability, production targets, and potential constraints. This would help prevent unexpected interruptions during operations.

The Production Department of Yunusco (BD) Limited demonstrated a structured, disciplined, and teamwork-oriented production management system. The department's strong leadership, standard procedures, and real-time performance monitoring reflected a professional and efficiency-focused culture. However, recurring issues such as absenteeism, material shortages, and operator skill gaps occasionally affected consistent productivity.

If the department can strengthen its digital integration, improve operator training, and enhance interdepartmental coordination, it will be able to achieve greater efficiency and stability. The internship experience provided a valuable opportunity to connect industrial engineering theories such as line balancing, motion study, and productivity optimization with practical factory operations. Overall, the Production Department offered a clear understanding of how discipline, teamwork, and continuous improvement contribute to achieving manufacturing excellence.

3.1.2 Industrial Engineering Department

The internship experience in the Industrial Engineering (IE) Department of Yunusco (BD) Limited was one of the most insightful and technically enriching components of the entire training period. It provided a comprehensive understanding of how industrial engineering supports the garment manufacturing process by combining analytical tools, process design, capacity planning, and performance optimization. The internship period from September 20 to October 2 allowed close observation of the operational, costing, and analytical functions of the IE Department and its collaboration with production, planning, and marketing units. This section presents a critical assessment of the strengths, challenges, and potential areas for improvement within the IE Department, based on direct observation and practical engagement.

Strengths of the Industrial Engineering Department

The first and most notable strength of the IE Department at Yunusco (BD) Limited is its well-defined organizational hierarchy and clear distribution of responsibilities. The department is managed by a Deputy General Manager (DGM), supported by an Assistant General Manager (AGM), an IE Manager, Senior Executives, and Executives. This structured leadership system ensures smooth coordination between strategic planning and operational execution. The DGM acts as the bridge between top management and operational teams, translating strategic goals into measurable productivity and efficiency targets. The strong leadership and accountability framework fostered a professional culture focused on continuous improvement.

Another major strength is the department's use of data-driven systems for costing and productivity planning. The Costing IE Team plays a crucial role in calculating the Standard Minute Value (SMV) and determining the Cost of Making (CM), which are the backbone of price negotiation and production planning. Their process of receiving sketches or samples from the marketing team, preparing the operation breakdown (OB), and assigning process-wise SMVs reflects a deep integration of technical analysis with business decision-making. The OB is treated as the most important production document on the floor—guiding machine setup, operator assignment, and daily target achievement. The precision and clarity in these documents show the department's commitment to standardization and efficiency.

The learning curve system adopted by the IE Department is another strong feature that distinguishes Yunusco from many other factories. By categorizing products such as bras, panties, and boxers into specific groups (B1–B3, P1–P5, M1–M2, HK1–HK5), the department manages to forecast learning time and efficiency levels accurately. This structured approach allows the factory to plan capacity, estimate production timelines, and allocate manpower more effectively. It also ensures that line

performance is analyzed not only by output but by learning behavior, which helps identify where operators need additional support or training.

The IE Department's continuous collaboration with production teams is another strength that enhances overall operational performance. Floor IEs, who are assigned to each section, work daily on-line balancing, capacity studies, and problem-solving. Their morning routine—checking absenteeism, adjusting manpower, and setting section targets—demonstrates a strong integration of industrial engineering principles into daily factory management. The use of analytical tools such as the Fishbone Diagram and the 4M method (Man, Machine, Material, Method) for root cause analysis shows a practical application of theoretical IE models in real factory conditions.

Additionally, the department's emphasis on skill mapping and training strengthens the factory's long-term efficiency. Maintaining an updated Skill Matrix for all operators allows the department to identify skill gaps, arrange cross-training, and ensure better manpower utilization. The IE Department also takes part in multiple coordination meetings, including pre-production, forecast, and target achievement discussions, which ensure alignment between production goals and strategic targets. Overall, the culture of teamwork, data-based decision-making, and continuous improvement forms the foundation of the IE Department's success.

Challenges and Weaknesses Observed

Although the IE Department operates with a high level of professionalism and technical depth, several challenges were observed during the internship that limit the department's overall effectiveness. One of the recurring challenges is the workload imbalance between costing and floor operations. The Costing Team often works under tight deadlines, especially when multiple new styles are received simultaneously from the marketing department. As a result, the preparation of operation breakdowns and layouts sometimes becomes a race against time, leaving less room for process optimization and validation through pilot studies. This occasionally leads to discrepancies between planned and actual efficiency once production starts on the floor.

Another challenge is the dependency on manual data collection during daily production studies. Floor IEs frequently conduct 5-cycle checks, line balancing analyses, and NPT (Non-Productive Time) recording manually. While this practice provides accurate insights, it is time-consuming and limits the frequency of studies that can be conducted per line. The lack of digital data-tracking tools delays real-time decision-making and makes historical data comparison more complex.

The department also faces limitations in cross-functional coordination. Although IE, Production, and Planning teams work closely, communication gaps sometimes occur, especially during line feeding or

style changeover. For instance, delays in receiving approved technical files or cutting approvals occasionally hinder timely layout implementation. These delays create a ripple effect, impacting both the learning curve and target achievement for that particular style.

Another challenge is related to operator skill variation. Despite having a comprehensive skill matrix, matching the right operator to the right operation is not always easy. High dependency on a few highly skilled operators creates bottlenecks during absenteeism or operator transfer. In some cases, the lack of multi-skilled operators results in slower learning and reduced line efficiency during new style introductions.

Additionally, the analytical workload on section IEs is extensive. They are responsible for line balancing, skill analysis, report preparation, and attending multiple meetings daily. This heavy multitasking sometimes limits the time available for in-depth process improvement studies or motion analysis. Moreover, the practice of late-hour operator training after 5 p.m. may lead to fatigue and reduced learning effectiveness.

Finally, the reporting structure and documentation process could benefit from further digital integration. The department produces several analytical reports—such as IE Flash Reports, WIP reports, and Style Analysis reports—but most are still prepared manually using spreadsheets. This manual process increases the risk of data entry errors and consumes valuable time that could otherwise be spent on analysis and innovation.

Suggestions for Improvement

Based on these observations, several improvements can be suggested to enhance the performance and sustainability of the IE Department.

Firstly, the introduction of digital industrial engineering tools such as line balancing software, motion analysis applications, and SMV management systems would reduce manual work and enhance real-time decision-making. Integration of these systems with production and planning databases would allow more accurate forecasting and dynamic line adjustments.

Secondly, strengthening interdepartmental communication through shared dashboards or digital communication platforms could reduce information delays during style changes or sample development. If the IE, Planning, and Cutting teams share real-time updates on readiness status, the factory could significantly reduce downtime during line feeding.

The company may also consider introducing a multi-skill development program to gradually reduce operator dependency. By training workers to handle multiple operations, the IE Department could achieve higher flexibility in manpower allocation, particularly during absenteeism or machine breakdowns.

Another recommendation is to establish a separate analytical support unit under the IE Department. This team could focus exclusively on data management, trend analysis, and digital reporting, allowing section IEs to concentrate more on process improvement and productivity enhancement.

Lastly, implementing automated reporting systems could streamline daily and weekly performance reports. This change would save time, reduce human error, and ensure that management receives accurate performance summaries for decision-making.

The Industrial Engineering Department of Yunusco (BD) Limited stands as a vital component in driving productivity, efficiency, and continuous improvement across the factory. The department's structured organization, strong technical foundation, and data-driven approach demonstrate its integral role in linking operational performance with strategic business outcomes. Despite facing challenges such as workload pressure, manual data handling, and skill variation, the department has developed an effective system for cost analysis, process standardization, and capacity management.

Through technological integration, enhanced communication, and structured training initiatives, the IE Department has the potential to reach even greater levels of efficiency and innovation. The internship experience in this department provided not only practical knowledge of IE tools and techniques but also an appreciation for the complexity of managing industrial processes in a competitive manufacturing environment. It reinforced the importance of collaboration, precision, and continuous learning as key drivers of industrial excellence.

3.1.3 Sample and Product Development Department

During my internship at Yunusco (BD) Limited, I had the opportunity to observe and learn about the activities of the Sample and Product Development Department, which plays a crucial role in the pre-production process. This department connects the buyer's creative concept with the factory's technical capability, ensuring that each design is accurately interpreted, technically sound, and production-ready. My observation period in this department covered both the CAD and Pattern Section and the Sample Sewing Section, where I gained practical understanding of design translation, pattern accuracy, and prototype garment preparation.

Strengths of the Sample and Product Department

One of the most notable strengths of the Sample and Product Development Department is the high level of technical expertise demonstrated by its personnel. The CAD and Pattern Team operates with advanced digital tools, such as Gerber software, to create and grade patterns with exceptional precision. This technological integration not only minimizes manual errors but also significantly enhances efficiency and fabric utilization. The digital archiving system further strengthens consistency and traceability, allowing quick reference for repeat styles or similar designs. This system ensures that the same quality and fit are maintained across different production batches, which is vital for maintaining buyer confidence.

Another major success factor is the close collaboration among the CAD, Technical, IE, and Sample Sewing teams. The flow of information between departments is systematic, beginning with buyer-provided tech packs and ending with pre-production samples that align with both design intent and manufacturability. The pattern masters and sample technicians frequently consult the IE Department during the development stage to ensure that each operation is feasible and efficient for bulk production. This integrated teamwork minimizes the risk of operational bottlenecks and supports quicker style stabilization once production begins.

The Sample Sewing Section stands out for its high skill level and adaptability. The operators in this section are multi-skilled and capable of handling frequent style changes, diverse fabric types, and specialized machines such as flat seamers, feed-off-arm, and bonding machines. Their ability to adapt to different styles within a short period demonstrates the department's technical strength and flexibility. Additionally, the quality control process is highly effective. The inline quality inspectors ensure that all measurements, construction details, and allowances strictly follow buyer specifications. This continuous in-process inspection reduces the probability of rejections and ensures that each sample submitted to the buyer is technically accurate and aesthetically aligned with the design brief.

Furthermore, the department's structured coordination with the IE team before mass production adds another dimension of strength. By allowing the IE Department to conduct operation analysis and layout studies in the sample section, the factory ensures that production runs smoothly when the bulk order begins. This practice not only enhances production readiness but also minimizes the risk of errors, delays, or rework during large-scale manufacturing.

Challenges and Weaknesses Observed

Despite the department's efficiency and technical proficiency, several challenges were observed during my internship. The first major challenge lies in communication delays between buyers and the

factory during the sample approval stage. At times, late feedback or unclear buyer comments result in repeated pattern revisions or re-sampling. This creates time pressure on the development schedule and sometimes overlaps with bulk production planning, affecting workflow synchronization between departments.

Another notable challenge is dependency on a limited number of technically experienced pattern masters. Since most critical styles require high technical precision, the workload becomes concentrated among a few skilled individuals, which can create bottlenecks during peak sampling periods. This situation highlights the need for broader skill development among junior pattern executives to distribute responsibilities more evenly and reduce time pressure on senior members.

The Sample Sewing Section also faces some operational challenges, primarily related to frequent style changes and unplanned modifications from buyers. Each new style requires a different machine setup, accessories, and skill set. This frequent changeover sometimes reduces productivity and creates stress on operators and technicians. Additionally, because of limited space and a high number of development samples in progress, material handling and workflow optimization remain areas that could be improved. Occasional shortage of specific trims or accessories during development also delays sample completion.

Quality rejections at the initial stage of development were another issue observed, mainly due to fabric variation or measurement mismatches during the first fitting. Although these are corrected later, they consume additional time and resources. Establishing a stronger initial checking system at the pattern and fabric selection stage could minimize such occurrences.

Suggestions

Based on my observation, I would suggest implementing a few measures to further improve the efficiency and workflow of the Sample and Product Development Department. First, establishing a centralized digital communication platform between the buyer, merchandising, and technical teams could reduce delays in sample approval and feedback. This would ensure faster clarification of technical queries and smoother handover of revised instructions.

Second, introducing a structured training program for junior CAD and pattern executives would strengthen the department's overall capacity. This would reduce dependency on a few senior staff members and help maintain output consistency even during busy sampling periods. In addition, regular cross-training between the Sample Sewing and IE teams could improve understanding of operation feasibility and enhance the technical knowledge of operators.

Lastly, improving space utilization and workflow layout in the sample sewing area could significantly increase efficiency. A more systematic material handling system and better coordination with the accessories store would minimize downtime caused by shortages or waiting time. Moreover, implementing a digital tracking system for sample progress could give management real-time visibility and help prioritize urgent styles.

In summary, the Sample and Product Development Department of Yunusco (BD) Limited demonstrates exceptional technical competency, teamwork, and alignment with buyer requirements. The integration of CAD technology, skilled sample operators, and collaboration with the IE team ensures the smooth transition from design to production. However, communication delays, dependency on limited experts, and space management remain key areas that require attention. With better training, digital communication tools, and optimized workflow, this department can further enhance its contribution to the company's operational excellence and buyer satisfaction.

3.1.4 Human Resource Department

The internship experience in the Human Resource Department (HRD) of Yunusco (BD) Limited provided a practical understanding of how the organization manages its people, maintains discipline, and ensures continuous development through structured systems. The HR department plays a vital role in supporting smooth factory operations by ensuring that each employee—from worker to management level—is properly recruited, trained, and motivated to achieve organizational objectives.

Strengths of the HR Department

One of the major strengths observed during the internship was the structured recruitment and selection process. From manpower planning to onboarding, each stage followed a systematic procedure that ensured transparency and fairness. The recruitment plan was aligned with the production forecast, minimizing both over- and under-staffing. The involvement of the HR Head, IE Department, and top management in manpower planning reflected a well-coordinated decision-making process.

Another key strength was the comprehensive training and development system. The HR department conducted both on-the-job and off-the-job training programs to enhance employee competence. The presence of a formal Training Need Assessment (TNA) process, training modules, and the use of the Kirkpatrick model for feedback demonstrated a professional approach to employee skill enhancement. This training culture created a positive learning environment within the organization and helped reduce skill gaps.

The performance appraisal system of YBDL was also structured and data-based. The use of both confirmation and yearly appraisals helped in monitoring employee progress, setting clear expectations,

and linking results to increments or promotions. Such structured evaluation not only motivated employees but also aligned their performance with company goals.

The disciplinary and welfare practices were another strong point. The HR team-maintained compliance with BEPZA and Bangladesh Labor Rules 2022, ensuring legal fairness in disciplinary actions. Meanwhile, the Welfare section worked actively to support workers' needs—covering absentee counseling, maternity follow-up, hygiene monitoring, and grievance handling. These initiatives strengthened employee trust and promoted a safe, positive workplace culture.

Overall, the HR Department displayed professionalism, coordination, and a strong commitment to maintaining industrial harmony and workforce efficiency.

Limitations and Challenges

Despite its many strengths, several challenges were observed during the internship. One major limitation was the dependency on manual record-keeping. Many HR processes, such as attendance, training feedback, and performance documentation, were still maintained in paper format. This made data retrieval and analysis time-consuming and occasionally prone to human error.

Another challenge was the limited digital integration among HR functions. For instance, the recruitment system, training records, and performance appraisal data were managed separately. The absence of a centralized HR software restricted real-time data tracking and delayed decision-making in manpower planning and employee evaluation.

A further limitation was the shortage of trained HR personnel, especially in the welfare and training units. Each officer handled multiple tasks simultaneously, which sometimes delayed feedback collection, counseling, or training execution. During peak production seasons, operator's turnover going high and factory straggling with the skill gap. Production and IE team continuously struggled for line balancing.

The lack of a standardized career development framework was also noticeable. Although the training and appraisal systems were structured, there was limited long-term career progression planning for junior employees. This could affect motivation and retention among staff seeking professional growth.

During internship I found no dedicated training school for the operator's skill upgradation. Due to skill gap production team losing huge business opportunity.

Finally, communication gaps occasionally arose between HR and production departments during manpower reallocation or disciplinary action. This sometimes led to confusion in line balancing or operator replacement, affecting productivity at the floor level.

Suggestions for Improvement

To overcome the above challenges, the HR Department could gradually implement a digital Human Resource Information System (HRIS) integrating recruitment, attendance, training, and performance appraisal data under one platform. Such a system would ensure accuracy, transparency, and faster decision-making.

The department should also focus on capacity building for HR and welfare officers through specialized training on counseling, communication, and labor law. Expanding the welfare team could help maintain continuous employee support even during busy production periods.

Moreover, the HRD can introduce a career path framework that links training achievements and performance appraisal scores with promotion or transfer opportunities. This would motivate employees to enhance their skills and stay committed to the organization.

Regular coordination meetings between HR, IE, and Production departments could further minimize communication gaps, ensuring that manpower decisions align with production needs.

3.1.5 Merchandising Department

During my internship at Yunusco (BD) Limited, my experience in the Merchandising Department provided me with practical knowledge of how marketing and order management functions are integrated within a large-scale garment manufacturing organization. I observed that the department plays a vital role in bridging the gap between buyers and the factory, ensuring that all business operations—from development to shipment—run efficiently and profitably. While the department demonstrated several strengths that contribute to the company's growth, there were also a few limitations that create operational challenges.

Strengths of Merchandising Department:

One of the major strengths of the Merchandising Department is its strong coordination among sub-teams such as Product Development, Costing, Procurement, and Bulk Merchandising. Each team operates under a well-defined structure and clear responsibility, which allows the entire department to function smoothly. I noticed that communication among teams and with external buyers is well maintained, ensuring that information flows accurately and on time. Another strength lies in the technical capability of the Product Development Team. Their ability to interpret buyer-provided tech packs, design details, and specifications into actual development samples reflects a high level of professionalism. They maintain strong coordination with the Sample and

Industrial Engineering Departments to make sure that the styles are not only visually accurate but also production-friendly. This collaboration reduces potential issues during bulk production and helps secure long-term buyer trust.

The Costing Team also showed remarkable efficiency. Their coordination with the Industrial Engineering Department to determine Standard Minute Value (SMV) and set realistic efficiency levels ensures accurate cost estimation. I found that merchandisers are skilled in negotiating prices with buyers while maintaining profitability. Their understanding of fabric consumption, labor cost, and overhead calculation contributes significantly to the company's commercial success. The Procurement Team is another strong part of this department. Their organized documentation system and careful material tracking create transparency in the supply chain. They maintain strong relationships with suppliers and ensure that materials meet buyer standards in terms of quality and compliance. The follow-up system for raw materials and purchase orders also helps in minimizing production delays.

Lastly, the Bulk Merchandising Team's role in order follow-up, production monitoring, and shipment coordination ensures that the buyer's delivery schedule and quality expectations are met. The team's focus on key performance indicators (KPIs) such as lead time, shipment rate, and quality performance reflects a data-driven approach to managing operations effectively.

Limitations and Challenges:

Despite these strengths, a few limitations were observed during my internship. One of the major challenges is the incomplete implementation of the Enterprise Resource Planning (ERP) system. Due to this, merchandisers sometimes face difficulties in obtaining real-time inventory information, which may lead to overstocking or delays in procurement decisions. This issue directly impacts efficiency, as accurate data is essential for planning material purchases and production schedules. Another challenge is the heavy dependency on manual follow-up and frequent communication with different departments. While the coordination level is strong, the lack of automated data sharing causes time delays, especially when multiple orders are in process simultaneously. Moreover, I noticed that the workload on bulk merchandisers is very high. Since they handle multiple buyers and large order volumes, they often face pressure to meet shipment deadlines while maintaining

quality and compliance. This sometimes leads to stress and reduces their capacity to focus on product development or innovation.

The department also faces challenges related to buyer-driven short lead times. In some cases, buyers change design requirements or colorways after the sample approval, which puts additional pressure on the development and procurement teams to adjust quickly within limited timeframes.

Suggestions for Improvement:

To overcome these challenges, I suggest that Yunusco (BD) Limited should fully implement the ERP system across all merchandising and supporting departments. This will ensure real-time information flow, better inventory control, and faster decision-making. Additionally, introducing digital order tracking systems can help merchandisers manage multiple orders more efficiently.

Training programs focusing on buyer communication, negotiation skills, and time management could further enhance the professional capacity of merchandisers. The company could also consider recruiting additional executives or providing team-based incentives during peak seasons to distribute workload effectively.

Finally, building closer coordination between the Procurement and Store departments through shared digital platforms would help minimize overstocking and improve lead-time accuracy.

3.1.6 Application of generic and industry-specific courses during Internship

During my internship at Yunusco (BD) Limited, I was able to connect theoretical knowledge from my coursework with practical industrial experience across multiple departments. The Business Communication course helped me communicate effectively through professional emails, reports, and presentations, which proved essential when coordinating between departments and documenting SMV calculations, production schedules, and costing updates, although I realized that informal real-time communication on the shop floor plays a critical role in practice. Analytical Skills and Competencies were useful in monitoring line performance, evaluating manpower utilization, and identifying production bottlenecks, yet combining quantitative analysis with on-the-spot observations was a practical nuance not fully addressed in the classroom. My HR skills and competencies supported my understanding of manpower allocation, training, and performance evaluation, but the internship highlighted additional challenges such as managing absenteeism, skill variation, and employee

motivation. The Introduction to Garments Industry course provided foundational knowledge about factory workflow, production processes, and departmental hierarchy, which I could observe and understand in action, enhancing my comprehension of real-world operations. Industrial Engineering knowledge, particularly SMV calculation and work measurement, was directly applied in assessing line efficiency and suggesting productivity improvements, while practical issues like machine downtime and operator variability required adaptive adjustments. Production Management concepts helped me understand order scheduling, capacity planning, and line monitoring, but handling urgent production issues, quality defects, and operator skill gaps gave me insights beyond theoretical frameworks. In Merchandising, my coursework guided me in order management, costing, and coordination with buyers, while the internship exposed me to additional practical challenges such as fabric sourcing, trim management, packaging, and meeting shipment deadlines. Finally, my understanding of Quality Management and Supply Chain Management was enriched by observing inspection protocols, quality checks, and coordination between vendors, production, and merchandising, showing how theoretical principles are implemented and adapted in real factory operations. Overall, the internship bridged the gap between theory and practice, deepening my knowledge and strengthening my analytical and managerial skills in the garment industry.

3.2 Learning for self-improvement

The internship at Yunusco (BD) Limited was an outstanding journey that significantly enriched my professional abilities, self-development and self-confidence. Working across different departments help me to observe the complete flow of operations—from order receipt to shipment—and understand how coordination between departments ensures smooth production and timely delivery. This experience has increased my concept regarding others department, problem-solving mindset, and decision-making confidence, which now support my current responsibilities in Industrial Engineering. The practical exposure to SMV calculation, production planning, manpower allocation, and cost analysis has improved my accuracy and efficiency in handling similar tasks in my present role. Moreover, interacting with diverse teams helped me develop leadership qualities, effective communication, and teamwork skills, which are essential for future managerial positions. The internship also strengthened my understanding of quality control, production efficiency, and cost optimization—key areas that directly contribute to achieving organizational goals. Looking ahead, the comprehensive knowledge and hands-on experience gained through this internship will not only help me perform better in my current position but also prepare me to take on greater responsibilities in management and strategic planning roles within the garment industry or in any other competitive

manufacturing environment. Overall, this learning experience has enhanced both my technical expertise and professional maturity, shaping me into a more confident and capable industrial engineer.

Chapter 4: Conclusion

This internship report is prepared based on my industrial attachment at Yunusco (BD) Limited, a prominent manufacturer of lingerie and knitwear in Bangladesh. The internship was a requirement of my Postgraduate Diploma in Knit Industry Management program and aimed to develop practical understanding alongside academic knowledge. Yunusco (BD) Limited is recognized for its strong production capacity, advanced technology, skilled workforce, and commitment to quality and timely delivery. Through this attachment, I gained a clear understanding of how different departments work together to achieve production and business objectives.

During the internship period, I was assigned to several key departments, including Industrial Engineering, Production, Sample, CAD and Pattern, Human Resource, and Merchandising. In the Industrial Engineering Department, I applied time study and SMV calculation techniques and learned about production efficiency and line balancing. My involvement in the Production Department helped me understand daily target setting, planning, and production monitoring. The Sample Department gave me practical exposure to sample development and buyer communication, while the CAD and Pattern Department helped me learn about pattern accuracy, marker efficiency, and fabric saving. The Human Resource Department introduced me to manpower management, skill development, and attendance control systems. In the Merchandising Department, I observed costing, order follow-up, and coordination between buyers and production teams.

Overall, the internship provided a comprehensive view of the garment manufacturing process and enhanced my technical, analytical, and managerial skills, preparing me for greater professional responsibilities in the apparel industry.

References:

1. <http://www.info@aepz.yunusco.com>
2. <http://www.info@aepz.yunusco.com>