00035 BBA C.1

Feasibility Study
On
An Export Oriented Knit Wear Garments

Department of Business Administration

# Feasibility Study On An Export Oriented Knit Garments

Submitted To
DR. TANVEER AHMED CHOWDHURY
Instructor
Department of Business Administration
East West University

Submitted By MD. JAHANGIR HUSSAIN MIAH ID No: 1998-3-10-068

Acknowledgement

#### Acknowledgement:

It has been a pleasure and an honor to show my heartiest respect to Dr. Tanveer Ahmed Chowdhury, for giving me the opportunity to work for this study. His enriched & powerfully structured discussion has been a great help in each step of this research writing. I show my deep respect for the extended helping hand that he provided for the research.

I would also like to acknowledge the following personnel for helping me in the research report:

1. Mr. Kutub Uddin Ahmed (President, BGMEA)

2. Mr. Abdul Mannan (Chairman, Mannan Group)

3. Shahriar Khan (Secretary, Sinha Group)

I have been fortunate for the support and encouragement that I received throughout the progress of the research project from my friends Sasha, Shajahan, Rumana, Ishtiak, Mahmudur Rahman, Habibul Islam, Md. Salauddin and Hossain Md. Amir of East West University. I am very grateful to all of them, their help and support made it possible for me to lead the research into a desired & successful ending.

Finally, I thank my friends & my dear parents for encouraging me throughout the research work. Their words & information has helped me in ways that cannot be expressed in few words. I thank them all with my deepest feelings.

**Executive Summary** 

# **Executive Summary**

The country exports its apparel products worth nearly 4 billion US\$ per year to the USA, EU, Canada and other countries of the world. At present the country is the 6th largest apparel supplier to the USA and EU countries. The major products are Knit and Woven Shirts and Blouses, Trousers, Skirts, Shorts, Jackets, Sweaters, Sportswear and many more casual and fashion apparels.

The Government of Bangladesh offers great incentives for encouraging the use of local fabrics in the export oriented garment industries. For encouraging textile export, the import of capital machinery is duty-free. Import of cotton is also duty-free. Moreover, the Government has recently implemented several policy reforms to create a more open and competitive climate for foreign investment.

Bangladesh is endowed with abundant and cheap labor force that is easily trainable and convertible into semi-skilled and skilled work force. Price, heavily weighted by the labor cost, is one of the main determinants of comparative advantage in the intensive garment industry.

The project envisages setting up of an export oriented Knitting, Dyeing and Finishing unit and setting up of an export oriented garments section at Narayanganj. Main machinery for the project has been proposed to be imported from Italy, Germany, and Japan. The project is expected to go into commercial operation within 9 (nine) months from the date of opening of L/C for imported machinery. Total Fixed cost of the Knitting Dyeing & Finishing unit & Garments unit has been estimated at Tk.204403 Lac.

As per data recorded in the publication of the International Trading Center (ITC), the global trade of knit garments are the USA, Germany, US, Japan, Canada and Sweden while the major exporters are Hong Kong, Pakistan, Portugal, Thailand, South Korea, Turkey and India. Import of knit garments by the major importers as well as the global imports value in 1995 is furnished US\$421,701 million. The global import of knit garments and the imports by the major countries are increasing. The global imports increased from worth US\$174171 lack in 1988 to US\$421701 lack in 1995 registering an average annual growth of over 16% during the said period.

About 75% of the requirement for knitwear exports are assumed to be met by existing units. Although the quality of the most of them is questionable and is frequently being complained by the international Buyers (the views has been taken on discussion with the local buying agents). The future export demand for knit fabrics and woven fabrics could be estimated on the basis of past growth of readymade garment export. During the period from 1991-1993, the growth of garment export was 30%. It is expected that the growth may decline in the future as the readymade garment industry may face stiff competition from the other developing countries of the world. Keeping it in view, growth rate i.e. 20% in case of knit fabric and 10% in case of woven fabric has been considered in the estimation of future export demand for knit and woven fabric respectively. These points suggest setup of "an export oriented knitwear garments".

The project is expected to break-even (Sale) at 41.89% of the assumed capacity utilization and 33.52% of the rated capacity at a sales value Tk.1821.20 Lac while P/V (profit volume) ratio is 35.52% of the rated capacity at a sales value Tk.4347.00 Lac. Financial Rate of Return calculated following DCF. Technique works out at 48% (approx.), which is satisfactory. The Project's payback period is calculated at 2.5 years (approx.).

The project is considered technically feasible, socially desirable, financially rewarding, commercially profitable, economically viable and highly suitable for Bank financing.

# Acronyms

# Acronyms

# $\mathbf{B}$ BTTB - Bangladesh Telephone and Telex Board BGMEA - Bangladesh Garments Manufacturers and Exporters Associations $\mathbf{E}$ EPB - Export Promotion Bureau EPZ - Export Processing Zone EU - European Union F FY - Financial Year $\underline{\mathbf{G}}$ GSP - General System of Preference GATT - General Agreement of Trade and Tariffs $\underline{\mathbf{H}}$ HRD - Human Resource Development Ī IT - Information Technology $\underline{\mathbf{L}}$ L/C - Letter of Credit $\underline{\mathbf{N}}$

NAFTA - North American Free Trade Agreement

### $\mathbf{M}$

MFA - Multi Fiber Agreement

## P

PC - Personal Computer

POS - Point Of Sale

## $\underline{\mathbf{S}}$

SWOT - Strength, Weakness, Opportunity and Threat

# $\underline{\mathbf{U}}$

UNDP - United National Development Program

1

# **Contents**

	3.16	Export market supply gap	51
	3.17	Export demand for dyeing, printing and finishing service	52
	3.18	Marketing Strategy	54
		3.18.1 Selling arrangement	54
		3.18.2 Product quality	54
		3.18.3 Output pricing	55
		3.18.4 Promotion	56
		3.18.5 Distribution or marketing	56
		3.18.6 Raw and packing materials	56
	3.19	Location advantage	58
	3.20	Justification of the program	58
4.0	Econ	omic aspects	61
	4.1	Cost of the project	62
	4.2	Means of finance	63
	4.3	Debt equity ratio on completion	63
	4.4	Fixed assets coverage ratio	63
	4.5	Capital structure	63
	46	Financial evaluation	6-
	4.7	Profitability forecast	65
	4 8	Debt-service coverage ratio	66
	4.9	Break-even analysis	67
	4.10	Cash flow	68
	4.11	Financial rate of return	68
	4.12	Payback period	68
	4.13	Conclusion and recommendation	68
5.0	Anno	exure	69
	5.1	Annex I	73
	5.2	Annex II	72

	5.3	Annex III	73
	5.4	Annex IV	74
	5.5	Annex V	75
	5.6	Annex VI	77
	5.7	Annex VII	78
	5.8	Annex VIII	79
	5.9	Annex IX	80
	5.10	Annex X	81
	5.11	Annex XI	85
	5.12	Annex XII	- 87
	5.13	Annex XIII	89
	5.14	Annex XVI	91
	5.15	Annex XVII	92
	5.16	Annex XVIII	45
	5.17	Annex XVX	96
	5.18	Annex XX	97
	5.19	Annex XXI	98
	5.20	Annex XXII	99
	5.21	Annex XIXII	101
	5.22	Annex XXIII	102
	5.23	Annex XIV	103
	5.24	Annex XXV	104
	5.25	Annex XXVII	105
	5.26	Annex XXVIII	106
۵	Gantt	Chart	
а	Biblic	ography	107

# Illustration

# List of Illustrations

## Figures:

1.	Organization and internal management	3
2.	Process flow chart	5
3.	Country's export - 1982-83	16
4.	Item-wise country's export - 1987-88	17
5.	Item-wise country's export - 1995-96	18
6.	Requirement of knit fabrics types	29
7.	Knit wear export in the country's in - 1996-97	29
8.	Knit wear export in country's in - 1997-98	30
9.	Export of Knit wear from Bangladesh	33
10.	T-shirt export from Bangladesh	37
11.	Export growth of T-shirt per year in percentage	38
12.	Compared performance of woven and knit wear in 1995-96	40
13.	Compared performance of woven and knit wear in 1998-99	40
14.	Projected export demand of knit wears	46
15.	Projected requirement of knit fabrics in M. Tons	47
16.	Requirement of knit fabrics types (in percentage) 1998-99	50
17.	Knit Fabrics required and supply locally 1998-99 (in 00'Ton)	50
18.	Demand/Supply gap on fabrics in - 1998-99	53

# Tables:

1.	Readymade knit wear	4
2.	Projected construction schedule (estimated in month)	12
3.	Contribution of major items in the country's export'	15
4.	Requirement and locally supplied during 1998-99	22
5.	Export of knit garments to NAFTA countries	26
6.	Knit wear export from Bangladesh	28
7.	Export of Knit wear from Bangladesh	32
8.	Knits wear growth (Tk. In Lac)	34
9.	Import by major importers and global trade of knit garments	35
10.	Export of T-shirts	36
11.	Comparison of Woven and knit wear to contribution in foreign trade	39
12.	Comparison in % of woven and knit garments exports	39
13.	International wage comparison	42
14.	Apparent consumption of fabrics by the readymade knit garment industry	44
15.	Requirement of garment fabrics (Category wise)	
16.	Requirement/supply gap in % for respective fabrics in 1998-99	49
17.	Requirement and locally supplied during 1998-99 (in 00 ton)	49
18.	Knit wear export market demand / supply gap	52
19.	Estimated export demand for dyeing, printing and finishing on the	
	basis of fabrics requirement by the EORMG1	53
20.	FOB price of products	55
21.	Price of raw materials	57
22.	Cost of the project	62
23.	Means of finance	63

24.	Profitability forecast	65
25.	Debt-service coverage ratio	66
26.	Calculation of debt-service coverage ratio	67
27.	Contribution to GDP	70
28.	Proposed project cost	71
29.	Proposed project financing	72
30.	Sales matrix	73
31.	Production matrix	74
32.	Sales estimate	75
33.	Larning forecast	77
34.	Estimate of working capital requirement	78
35.	Cost of good sold statement	79
36.	Raw materials estimates	80
37.	Raw materials	81
38.	Wage and salary	85
39.	General and administrative overhead	87
40.	Depreciation calculation	88
41.	Repayment Schedule of project loan	89
42.	Repayment schedule of l.D.C.P.	90
43.	Estimated financial expenses	91
44.	Capital (imported) machinery list	92
45.	List of local machinery and equipment	95
46.	Erection and installation cost	96
47.	Office equipment	97
48.	Factory furniture	98
49	Projected cash flow statement	99

5().	Discount cash flow statement	]()]
51.	Break-even analysis	102
52.	Financial ratios	103
53.	Sensitivity analysis increase of 10% raw material price	104
54.	Sensitivity analysis of 5% increase sales price	105
55.	Projected balance sheet	106

Introduction

# Introduction

### Chapter 1

#### 1.1 Introduction:

Bangladesh - the country of world famous muslin fabric and the Great Royal Bengal Tiger has now emerged as a child labor free apparel giant in the world textile and apparel market. The country exports its apparel products worth nearly 4 billion US\$ per year to the USA. EU, Canada and other countries of the world At present the country is the 6th largest apparel supplier to the USA and EU countries. The major products are Knit and Woven Shirts and Blouses, Trousers, Skirts, Shorts, Jackets, Sweaters, Sportswear and many more casual and fashion apparels.

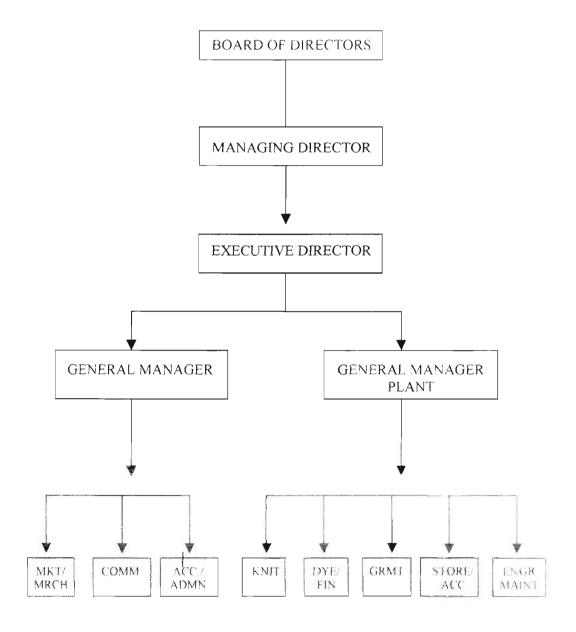
The Government of Bangladesh offers great incentives for encouraging the use of local fabrics in the export oriented garment industries. For encouraging textile export, the import of capital machinery is duty-free. Import of cotton is also duty-free. Moreover, the Government has recently implemented several policy reforms to create a more open and competitive climate for foreign investment.

Bangladesh is endowed with abundant and cheap labor force that is easily trainable and convertible into semi-skilled and skilled work force. Price, heavily weighted by the labor cost, is one of the main determinants of comparative advantage in the intensive garment industry. The price of labor in our country is lower compared to some of our neighboring countries as well as some other

garment producing countries in South-East Asia and East Europe. Obviously, existence of such cheap but easily trainable labor is one of the advantages that Bangladesh enjoys and will be enjoying over a considerable period in the context of international trade on clothing.

An extensive program of incentives, to expedite investment in the country, are now in place covering \* No Ceiling for investment \* Tax holiday of up to 10 years \* Tax-exemption and duty-free importation of capital machinery and spare parts for 100% export oriented industries \* Residency permits for foreign nationals including citizenship \* Easy capital profit and divided repatriation facilities \* Double taxation avoidance \* Tax-exemption on the interest payable on foreign loans \* Taka convertible on current account etc. Investors can also take advantage of the generalized system of preference, which allows duty-free access to American, European and Japanese Markets.

### 1.2 Organization and Internal Management



**Technical Aspects** 

## Chapter 2

#### 2.0 Project Brief:

#### 2.1 Project Propose and Design:

The project envisages setting up of an export oriented Knitting, Dyeing and Finishing unit and setting up of a export oriented garments section at Narayanganj. Main machineries for the project have been proposed to be imported from Italy, Germany and Japan. The project is expected to go into commercial operation within 9 (nine) months from the date of opening of L/C for imported machinery. Total Fixed cost of the Knitting Dyeing & Finishing unit & Garments unit has been estimated at Tk 204,403 Lac Details of fixed cost estimates may be seen in annexure-1.

#### 2.2 Product Mix and Proposed Capacity:

The annual production capacity of the section on the basis of double shifts operations of 12 hours each for Knitting, Dyeing finishing & Garments section per day & 300 working days in a year is given below:

#### A. Readymade Knitwear:

Items	Quantity	Required Fabrics
T-shirt	1,20,000 Doz.	
Polo Shit	1,20,000 Doz.	<u> </u>
Ladies/Spender/high value items	1,20,000 Doz.	· · ·
	Total: 3,60,000 Doz.	12,00,000 kg.

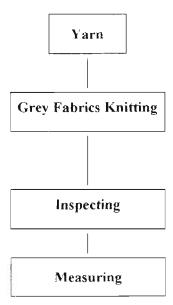
#### B. Service (Dyeing and Finishing):

The project will produce about 13,20,000 kgs of fabrics per year, although the requirement for Garment making is around 12,00,000 kgs a year at 100% installed Capacity.

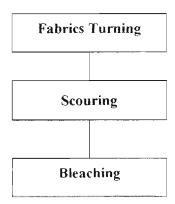
# 2.3 Manufacturing Process:

A composite knit unit starts from procurement of yarn, then the process starts knitting of gray labrics, dueing of fabrics, finishing of fabrics for making of garments and finally of readymade garments. A typical flow process for the manufacturing of the above products Mix is show below:

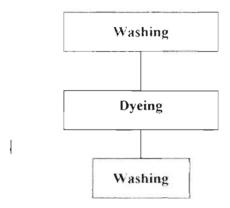
#### **Process Flow Chart**



#### KNITTING

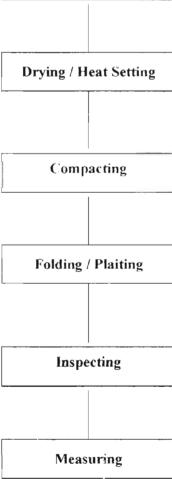


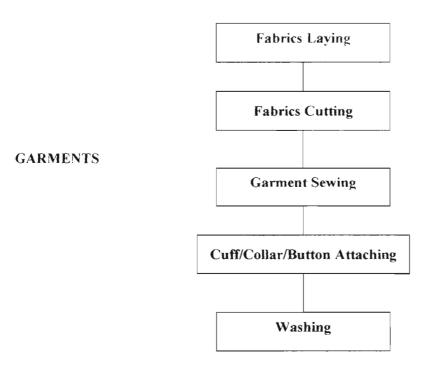
#### **DYEING**



**Hydro Extraction Slitting** 

#### FINISHING





#### Yarn:

Yarn is the main raw materials for knit fabrics; knitting yarn is of special type different from weaving yarn. In general year of 20, 24, 26, 30, 32 counts are used in the knit fabrics.

#### **Gray Fabrics Knitting:**

After receiving the yarn in carton or gunny bag in cone from, it is measured and put in the creels of the Circular Knitting Machines. The machines continuous kmis, whenever a cone is empty being replaced by a new one. Fabrics come out in rolled in Grey form. Rolls are stacked as per the sizes and GSM for delivery to dyeing Section.

#### <u>Inspecting</u>:

After the knitted fabrics are produced, it is inspected in running condition while passing over a table of the inspection machine. Inspection in this stage done by one Gray Fabrics Collar and Cuff are inspected manually piece by piece.

#### Measureing:

Before Delivery Fabrics for dyeing are inspected and measured in scales.

#### Scoring:

Scouring is the clearing of textile materials of natural facts, waxes, dirt's, oils, grease etc., by treating with alkalis. The bleaching process if essential for a good white effect and may be carried out with peroxide a bleaching power solution. After scouring and bleaching, the Fabric becomes hydrophilic.

#### Dyeing:

After scouring / bleaching, the knitted fabrics will be dyed in the dyeing machine using Suitable dyes and chemicals, for dyeing of knitted goods specials treatment is necessary. Temperature control in every stages of dyeing is very important.

#### Washing:

After scouring, bleaching and dyeing necessary washing will be carried out.

#### DE-twisting, DE-watering and Sitting:

Water from the wet Fabrics is removed by this operation. The Fabrics in tubular form without having creasing marks and lesser moisture goes into next step for drying.

#### Drying:

The two general methods of drying textiles are by contract temperatures, as in cylinder drying, or by hot air drying, in which the heat content of the air in the immediate vicinity remains constant but the temperature falls as moisture is absorbed leaving the fabrics at

the constant temperature as long as water is present. To control shrinkage the fabric is allowed pass the drying with out any tension.

The three available methods of heat transfer are: by conduction convection and radiation. Conduction is commonly used in the cylinder drying machines, or cans, where the fabrics is heated by direct contract with a metallic surface. The most frequent method of drying textiles, however, is by convection currents as employed in the numerous hot air machines. Radiation method has been almost abandoned except for a few special purposes.

For this project convection method of drying will be used in the tensionless dryer. The fabrics move form one chamber to another chamber in different temperature and speed without any tension in it. During movements the fabric comes act of exit through conveyor with its own wish, no tension or clipping attached here. The Fabric dryer in trembling touches and remains tension free. A heat setting machine will do heat setting of the T/C Fabric.

#### Calendaring:

It is necessary to condition the fabric Calendaring. Spraying hot water or steam on the fabric does conditioning. Calendaring is essential for the clear-cut finishes, as it improves smoothness and gives additional firmness and solidity to the fabrics. Calendaring also corrects the width of the cloth

To have bright soft and lustrous effect in finished form, it is calendar. In case of cotton fabrics after Calendaring the fabrics requires being compaction.

#### Compaction:

Finally after drying of the cotton fabrics, there may still remain some residual shrinkage problem. Compactor is used to get rid of residual shrinkage as per user desires. The fabric's passes through felts roller have some steaming there. Open width compaction will be used for this project, comes out of the exit through a platter. After compaction the fabrics is ready in delivery in plaited form.

#### Inspection:

Inspection is the finished goods is necessary to identify the defects in the fabric. This is done in running condition while passing over stable of the inspection machine.

#### Folding and Rolling:

A folding and rolling machine to facilitate easy and convenient transportation of the goods will do folding and/or rolling baling of the finished goods

#### Fabrics Laying:

The finished fabric is delivered to the Garment section, for final production of T-shirts, Polo, Sportswear, Nightwear and dresses.

### Fabrics Cutting:

Finished fabrics in roll Orin plaited form dyed in a long table. The fabrics of same dial and weight lay in the table in five/six layer. Pattern matter places market on the fabrics. Fabrics cut by brand knit or by any sophisticated cutter following the markers. So, after cutting the desired cut fabrics are ready for sewing.

#### Sewing:

This is the main functional stage of a garment plant. All the fabric's parts according to the desired pattern / maker are stitched together. If cuff / collar required, they are attached with the body. Different types of dresses has different requirement of trainings.

#### Tread Cutting:

Finished garments it its ultimate shapes / sizes were ready, now requires to be cleaned pass inspection. Before inspection the threads remaining in the garment cut off.

#### Inspection:

Before folding and poly packing the garments in finished form are inspected by the inhouse quality controllers and cartooning.

#### Poly Packing:

After passing inspection the finished garments are poly packed singly as per size and color and cartooned for final delivery. Cartoons contain the name of the buyer, pack size. Color and destiny, etc. Finally the cartoons are ready for delivery.

# 2.4 Projected Land and Location :

The project will be located at Narayanganj on a plot measuring 260 decimals equivalent to 10 bigha. The land is situated at a location, which is 22 Kim, from Dhaka City. The infrastructure facilities like Gas, Power and Water are easily available and the road is connected to the site.

ł

# Project construction schedule (Estimated In Month):

Sl.No.	Description	Month
1.	Documentation	1st month
2.	Site development started	2nd month
3.	Site development completed	4th month
4.	Building construction started	2nd month
5	50% construction completed	3rd month
6.	100% construction completed	6th month
7.	Establishment of L/C	3rd month
8.	Arrival of Machinery at port	6th month
9.	Arrival of Machinery at site	8th month
10.	Machinery installation completed	10th month
11.	Electrification & Sanitation completed	10th month
12.	Unforeseen Delay	11th month
13.	Trial Run	11th month
14.	Normal Operation Started	12th month

# **Market Aspects**

#### Chapter 3

#### 3.1 Introduction:

Clothing is a necessity and therefore makes up a substantial part of the budget of households. In developed countries consumer spending on clothing ranges 6%-7% of their budget. While in developing countries, clothing accounts a substantial part of total consumer spending. The major textile producing and trading countries USA, France, Germany, Italy, UK, Greece, Portugal, Japan, China, Taiwan, India, Pakistan, Indonesia, Philippines, South Korea, Mexico, Brazil. Turkey and European United Nation account for three-quarters of world consumption. Almost all developed countries have seen their self-sufficiency's diminish. In several major Western Countries self-sufficiency in clothing and textile is below of approaching 50%.

The balance portion of consumption of cloths is met through import In developing countries the capture of export markets in textiles and clothing is a valuable and necessary way of earning much needed currency to spend on other goods and services.

Among the growing in the non-traditional sectors, garments sector has made significant progress in recent years attaining a phenomenal growth within the last one decade. Deposit quota restrictions, garments export have expanded reasonably since 1984-85 and nov/ it is one of the largest export earners amongst all the non-traditional export items. Export earnings from this sector has been raised from US\$ 4.0 billion in 1998-99 at an average annual growth rate of 20%. The industry has provided more than a million jobs, mostly to women, setting an motion a social transformation.

In the National Economy, Garment Sector contributing a vital role not only in GDP but also by employing a huge human resource and mostly the women population who has no direct contribution to the National GDP earlier.

Although garments industry is of recent origin, it is fastest growing export commodity of Bangladesh. Garment Industries began to be established from 1978. At the end of 1983, there were 47 units, some of them are fairly big and rest is moderate size presently, apparel manufacturing industry is a matured organized and thriving sector having more than 2800 garment factories registered with the Bangladesh Garments Manufacturers and Exporters Association (BGMLA).

#### 3.2 Contribution of Garment Sector in the Country's Export:

The scenario of sectional contribution in he economy of Bangladesh has been changed during the last two decades. Garment sector emerged as one of the promising non-traditional sector in foreign trade of the Country in early 80's. In 1982-83 Garment Sector did not have any contribution in the export of the Country, whilst during 1990 to 2000 the contribution raised significantly and become the highest export earner of the Country.

The Export contribution of the major groups in every 5 years interval (1982-83, 1987-88 and 1995-96) and 1996-97, '997-98 are shown in the Table hereunder.

TABLE III

Contribution of major items in the Country's Export

Item	1982-83	1987-88	1995-96	1996-97	1997- 98
Readymade garment	1.60	40.00	52.20	50.65	55.09%
Knitwear	0.00	1.00	15.41	17.28	18.20
Jute	16.00	8.20	2.34	2.63	2 09
Leather	8.40	11.70	5.45	4.42	3.70
Jute goods	46.60	21.70	8.47	7.19	5.40
Frozen goods	10.50	9.10	8.08	7.26	5.69
Chemical products	2.30	1.70	2.54	2.46	1.44
Tea	6.80	2.60	0.85	0.86	0.92
Other	7.80	4.00	6.66	7.25	7.47
	100.00	100.00	100.00	100.00	100 00

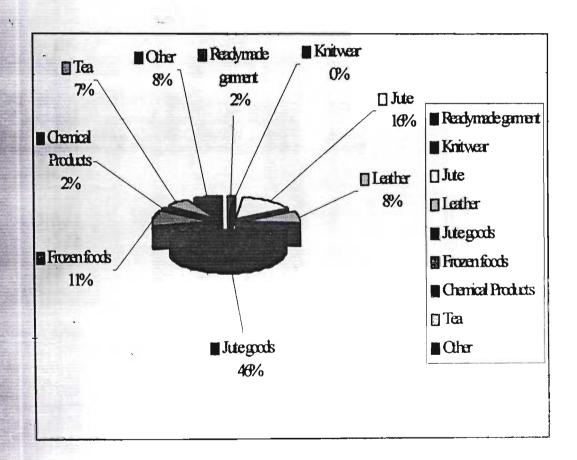
The table shows the contribution of readymade garments and Knitwear was 1.16% and 0% respectively in 1982-83. Whilst the contribution rose up to the level of 55.02% and 18.20% in the year of 1997-98, respectively, of the country's total export earnings, [although the sector stepped in to the foreign trade as a non-traditional item in the decade of 80°s.

Readymade garments along with knitwear, at present, ar more than 75% of the total export carnings of the country. The graphical representation of item wise

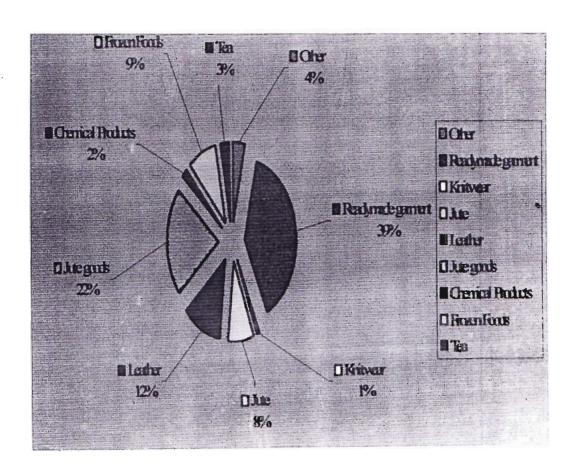
export contribution in the country's total export earnings has been shown in the next pages.

It is revealed from the fact that the dependency on overall Garment and textile sector for the country is not only for to maintain a good export / foreign trade performance rather it has become the and the only indispensable sector that the fall of which will have direct effect in the economy of the country and its survival.

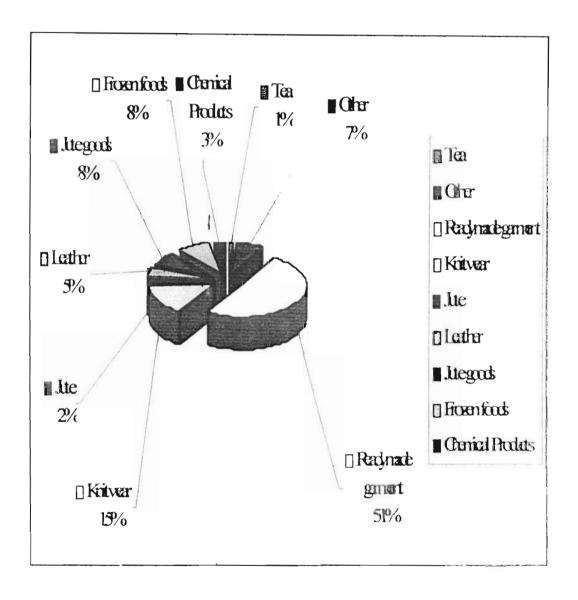
# Country's Export - 1982-83



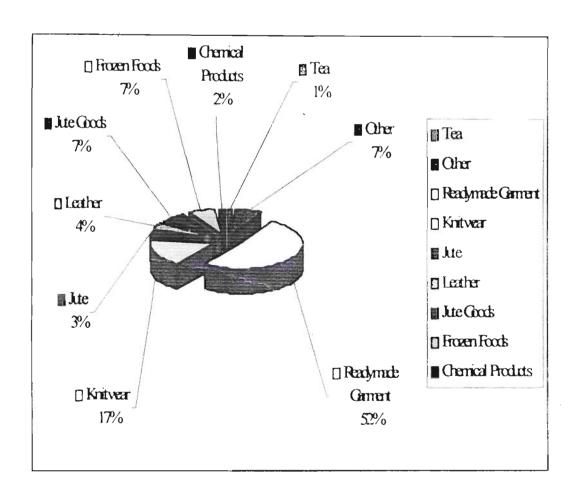
# Item Wise Country's Export - 1987-88



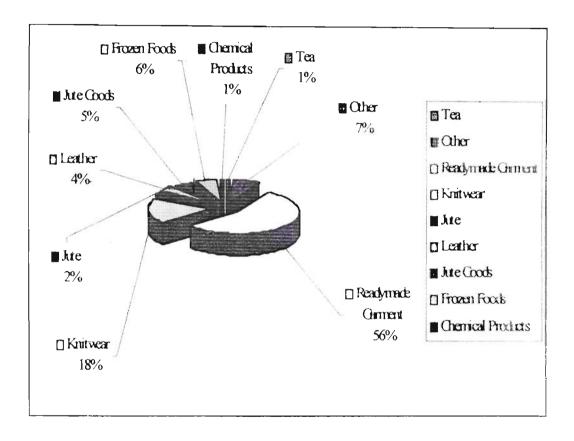
# Item Wise Country's Export - 1995-96



# Item Wise Country's Export - 1996-97



# Item Wise Country's Export - 1997-98



It is apparent from the data and graph that the country's foreign trade is increasingly dominated by the garments sector. The domination increased every year. Knitwear as well as Woven Garment is increasing very fast from year of 1986-87 when knitwear constituted 1% of foreign trade whereas in 1997-98 the contribution of knitwear raised to the level of 19% of the whole foreign trade.

#### 3.3 Knit Wears:

Knitting is the art of making Fabric in which the loop, a segment of yarn disposed in the form of a round fold, is the principal element. The structure of every knitted fabric is characterized by successive rows of loops drawn through series of loops In the production of the fabric this operation can be continued definitely, and in many tubular and flat fabrics the stitch pattern is complete on one row of loops all succeeding rows being duplicates of the first. The knit fabrics known in common are Single, Jersey, Interlock, Pique, Lacosta, Milano, Terry and Rib etc. The major types of knit Fabrics requirement and their percentage in 1998-99 (based in Mt Ton consumption calculation on finished product) have shown in the table and chart in the next page.

There are various type of finished products of knit wears like T-shirts, Polo shirts, Tops/Trousers, Jersey, Pullover, Jumpers, sportswear's, jackets, other garments, under garments night dresses and other

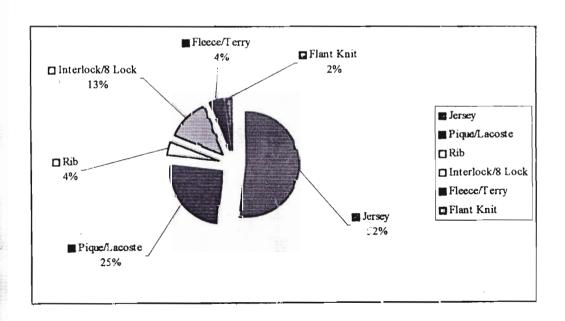
Table IV

REQUIREMENT AND LOCALLY SUPPIED DURING 1998-99

(In 00'TON)

ITEM	REQUIREMENT	PERCENTAGE
JERSEY	589	0.52
PIQUE / LACOSTE	287	0.25
RIB	40	0.04
INTERLOCK / 8 LOCK	144	0.13
FLEECE / TERRY	45	0.04
FLAT KNIT	17	0.02
	1122	1.00

# REQUIREMENT OF KNIT FABRICS TYPES (IN PERCENT) 1998-99



#### 3.4 Advantages of Knit Wears:

Because of Casual and soft in nature as well as inherent good properties such as hygienic properties, fashionable design and color knit wears have become a popular wear all over the world, knitwear's are informal but fashionable usually with short sleeves. knit wears are commonly made of knitted fabrics of single jersey, Ribs, interlock, Fleece, terry, Lacoste, pique, Milano, honey comb etc. due to the specifications in raw materials by suing lower count of yarn, construction of fabrics and stitching, knit wears posses certain properties which are essential for good apparels, some special advantages of knitted wears are given below.

- 1) Knitted garments are softer and more comfortable;
- 2) Knitted wears / garments are usually used as underwear fabrics i.e. used for soft skiing abrasion.
- Usually lower count of yarn is used for knitted fabrics, so, knitted has more socking capability.
- 4) More profitable production can be made due to lower project cost and cheaper management cost
- 5) Knitted wears can be handled more easily while using and washing.
- 6) Its market price is comparatively cheaper.

#### 3.5 Garments Industries and Bangladesh:

The garment sector plays an important role in the domestic economy and it has opened a big opportunity for establishment of linkage industries. Bank, Insurance, Freight, transport, hotels, shipping etc. And growing, at a fast rate due to the growth of garment industries. The garment industry has many unique elements uncommon to other industries such as high growth, export oriented, high production diversity, small-scale operation, light in nature and potentiality of vertical expansion, female dominated employment and dependence on imported raw materials. The technology of garment industry is simple and labor intensive and investment per worker is very poor in our country. As such, Bangladesh is in a favorable position where such industry could prosper. At present, the garment sector has not only imprinted the name of Bangladesh on the world economic map but has established itself as one of the leading supplier in the international clothing market.

#### 3.6 The New GATT Agreement, NAFTA and Quota System:

Quotas under the multi-fiber Arrangement (MFA) and its predecessors have restricted a large part of world textiles and clothing trade for almost 40 years. Under GATT 94 all textile and clothing quotas are to be terminated. The treaty is likely to come into effect in 1995 and quotas are likely to end by 2005 about half of all quotas will be integrated in three stages. Remaining quotas at each stage will become subject to accelerating growth. In 2005 the remaining half will be integrated at one go

In agreeing to open their markets, developed countries have insisted that developing countries open theirs too. GATT 94 commits all members to improving access to their markets and includes strengthened rules for dealing with dumping, subsidies and counterfeiting.

Assuming GATT 94 goes through - it still has to be ratified by individual governments - it will have a major impact on the pattern of world textile and clothing trade. Quotas are likely to remain on China, which is not a GATT member. But if its application for membership is successful, Chine-unrestrained by quotas could end up supplying 60-80% of EU and US import volume.

The garment industry of Bangladesh may be hard-hit in foresceable future in two ways. One is from NAFTA (North American Free Trade Agreement), a tri-lateral agreement among the USA, Canada and Mexico, while the other is from the withdrawal of Multi Fiber Agreement (MFA) allowing quota to different less developed countries under the auspices of GATT. Mexico appears to be the most immediate beneficiary of NAFTA in terms of both investment and trade. Table-1 represents the share of export of Bangladesh that goes to NAFTA countries.

Table - V

Exports of Knit Garments to NAFTA countries

Year	Export of knit Garment from Bangladesh (million USS)	% Share of Export of Bangladesh to NAFTA	Annual increase
1989-90	14.84	15.11	-
1990-91	131.20	27.44	81.60
1991-92	118.56	25.35	-7.62
1992-93	-	264.13	10 times
1994-95	1016.81	N. A.	N. A.
1996-97	1245.20	N. A.	N. A.
1997-98	1673.78	N. A.	N. A.

It may be mentioned that the garment industry of Bangladesh enjoys quota systems under the Multi Fiber Agreement as well as low tariff rate for having GSP facilities (General System of Preference) due to its least developed status. However, these facilities are going to be phased out gradually in a time frame and shall completely be withdrawn in the 2005 as has been conceded in the new GATT agreement, finalized in December, 1993 integrating the same into the free regime where no protectionism would prevail. If Bangladesh cannot develop backward linkage industries, e.g. spinning, weaving and finishing of textile for maintaining its comparative cost advantage, then the country may face sufficients.

1

competition with other garment manufacturing countries like China. Japan.

Taiwan, South Korea and Hong Kong with their relatively low cost fabric.

All types and varieties of readymade garments do not have free entry to every importing country. USA and Canada have imposed quota system on import of some readymade garment items from Bangladesh. However, Knitted wear i.e. Tshirt (the products of the proposed project) is a non-quota item for EEC and other major importing countries except USA. There are 59 products where trade is being developed.

US\$148 Lac in FY 1989-90 to US\$9403 Lac in 1997-98. The average annual increase was over 400%. Though the exports from Bangladesh is seen to have increased at a very high rate the share of Bangladesh in the Global Trade is very negligible. The share of Bangladesh in the Global Trade was only 0.09% in 1988, which stood at 0.75% in 1992-93 this indicates that there is scope for development of knitwear manufacturing capacity in the country. However, the exports of knit garments from Bangladesh to different countries are furnished in Table-IV

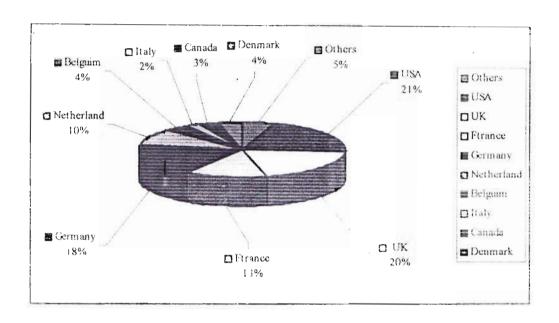
The major export of knitwear's from Bangladesh goes to USA and European Market. Although very little but not least important for the country that due to quality consciousness some potential market is being harvested in the recent years one of them is Japan.

Country-wise export of knitwear is shown in the table below:

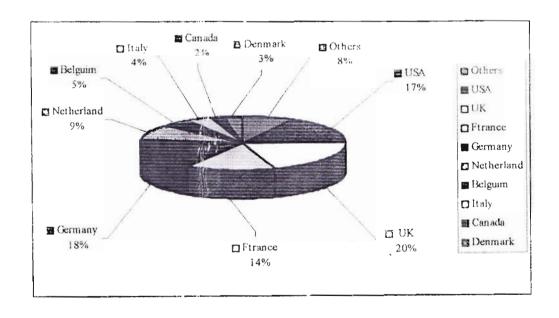
TABLE - VI KNITWEAR EXPORT FROM BANGLADESH

COUNTRY	1995-9	6	1996-9	7	1997-9	8
1	VALUE 000 US\$	0/0	VALUE 000 US\$	o. <sub>'a</sub>	VALUE 000 US\$	9/9
USA	121376	20.29	128851	16 88	229849	24 44
UĶ	114988	19.22	154488	20.24	144530	15 37
FTRANCE	77386	12.93	114041	14.04	137648	14 64
GERMANY	10795	18.04	139254	18 24	130399	13 87
NETHERLAND	60707	10.15	71250	9 33	75647	8 04
BELGIUM	26550	4.44	37040	4.85	60677	6.48
ITALY	14785	2.47	28710	3.76	46308	4.92
CANADA	16656	2.78	11694	1.53	27953	2 97
DENMARK	25500	4 26	21229	3 03	23957	2.55
SWEEDEN	6654	1.11	12061	1.5	14736	1.57
SPAIN	5685	0.95	6195	0.81	10731	1.14
AUSTRIA	1485	0.25	4539	0.59	5820	0.62
NORWAY	4614	0.77	5092	0.67	5665	0.6
FINLAND	3483	0.58	4785	0.63	4256	4.5
IRELAND	1820	0.31	2552	0.39	3347	0.36
SWITZERL AND	2108	0.35	3120	0.41	3170	0.34
JAPAN	480	0.08	483	0.06	2919	0.31

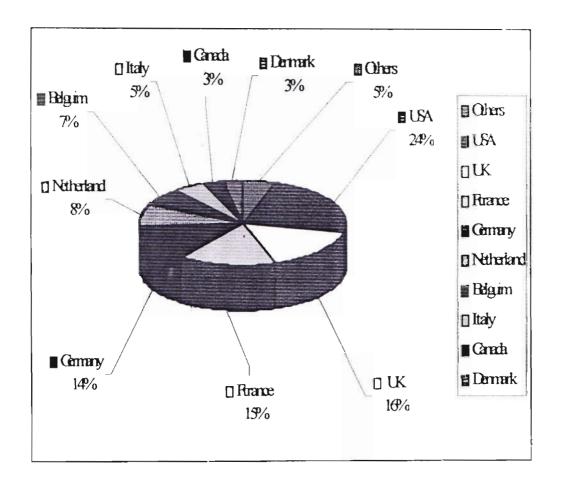
# **EXPORT OF KNITWEAR IN THE COUNTRIES IN 1995-96**



#### EXPORT OF KNITWEAR IN THE COUNTRIES IN 1996-97



## **EXPORT OF KNITWEAR IN THE COUNTRIES IN 1997-98**



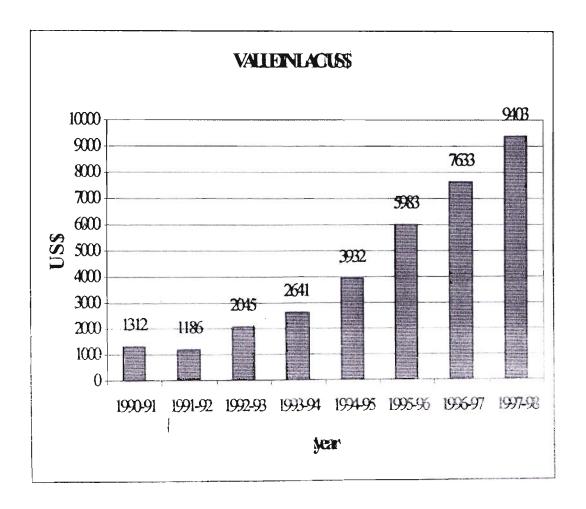
From Table IV it indicates that the USA is the largest importer of knit garments from Bangladesh representing 24% of the total export earnings in 1997-98 followed by UK, the second biggest exporter, representing about 15%.

#### 3.7 Export of knitwear and its Growth:

In the beginning of the Decades of 80's, Bangladesh entered into the world Garments market with very small steps. Some very much optimistic, risk oriented and bold entrepreneur foresighted the potentiality of Bangladesh in the world Garments market and took the risk to enter there with their limited resource and without institutional patronizationn. The fruits, today, the country is getting from the sector is of highest among all the sectors. Although, the export market of Garment started by woven items, the groundwork of knitwear production was prevailing for the local market in Narayangani Region.

In 1982-83, knitwear export was at 0% level, which in 1988-89 knitwear contributed around 19% of the total of country's foreign trade. Even in 1987-88 knitwear sector contributed only 1% of the total Foreign Trade of the country. But, since then knitwear sector stepped into the market with high optimism. The 90s decade started with flourshing appearance in the market. The Table below shows the knitwear export form Bangladesh from the year 1990-91 to 1997-98 and the chart shows the growth in the next page.

## **Export of Knit Wear from Bangladesh**



The table below shows the growth of knitwear during 1995-96 to 1998-99

<u>Table - VIII</u>

Knitwear Growth (in Lac Tk.)

YEAR	KNITWEAR EXPORTED	GROWTH IN %
1995-96	24471.25	-52.12%
1996-97	32105.13	32.80%
1997-98	42661.75	31.26%
1998-99	49679.56	16.45%

The growth in 1997-98 shows a title decline due to the heavy flood and political unrest in the country. The overall average growth rate of knitwear registered more than 25% a year.

#### 3.8 Global Trade of Knit Garments:

As per data recorded in the publication of the International Trading Center (ITC). the global trade of knit garments are the USA, Germany, US, Japan, Canada and Sweden while the major exporters are Hong Kong, Pakistan, Portugal, Thailand, South Korea, Turkey and India. Import of knit garments by the major importers as well as the global imports in value terms for the period from 1998 to 1995 is furnished in Table-IX.

Table - IX
Import by Major Importers and the Global Trade of Knit Garments

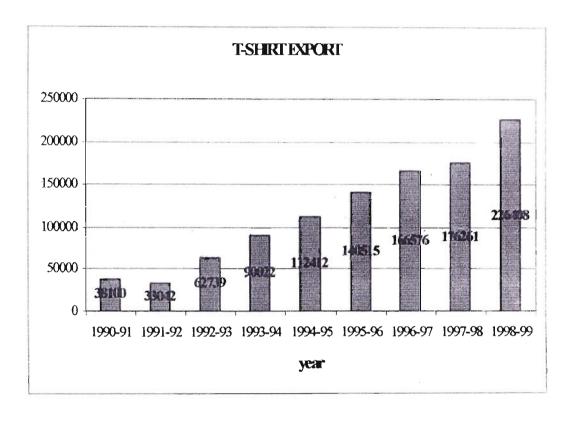
Importers	1998	1989	1990	1991	1992	1993	1994	1995
USA	68846	58303	61380	63944	78329	84283	91868	100136
Japan	12533	13639	12758	16064	19907	21854	24695	27905
Canada	3398	3801	4294	4107	4747	5083	5540	6039
EEC	73784	78488	106470	128070	144237	164415	195653	54802
Others	15610	16668	22688	30635	32121	38057	45668	54802
Total	174171	170899	207590	242820	279341	312692	363434	421701

It reveals from Table-VII that the global import of knit garments and the imports by the major countries are increasing. The global imports increased from worth US\$ 174171 Lac in 1988 to US\$ 421701 Lac in 1995 registering an average annual growth of over 16% during the said period

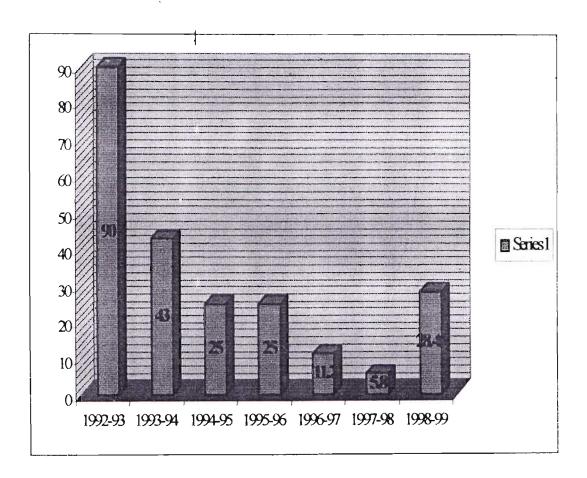
## 3.9 Export of T-shirt from Bangladesh:

Export of T-shirt from Bangladesh and its share to total export earning of the country have been in Table-X.

# T-shirt Exports From Bangladesh



## **Export Growth of T-shirt per year in Percentage**



## 3.10 Export position of M.G, Knitwear and T-shirt:

Both the Woven Ready Made Garments and Knitwear has a steady growth in export. To complete the trend contribution of the both items in the foreign trade is given in table bellow:

Table - XI

# COMPARISON OF WOVEN AND KNITWEAR CONTRIBUTION IN FOREIGN TRADE

ITEM	1995-96	1996-97	1997-98	1998-99
WOVEN RMG	7970	9529	12800	14321
KNITWEAR	2447	3250	4266	4967
TOTAL	10417	12779	17066	19288

Contribution in foreign trade made by Woven Garments and Knitwear compared in percentage is given bellow with year wise graphical representation:

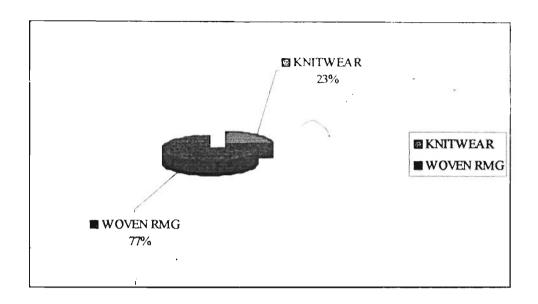
Table - XII

COMPARISON IN % OF WOVEN AND KNIT GARMENT EXPORTS

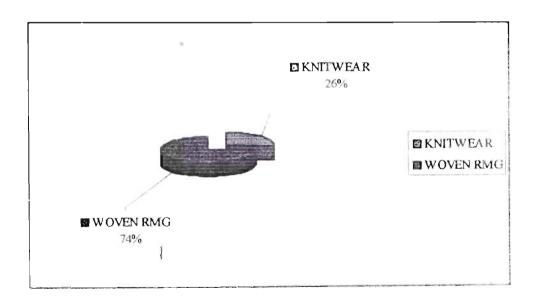
ITEM	1995-96	1996-97	1997-98	1998-99
WOVEN RMG	76.6	74.97	74.56	74.4
KNITWEAR	23.4	25.03	25.44	25.6
TOTAL	100	100	100	100

Graphical presentation of Woven Garments Export and knitwear Export performance for the year 1995-96 and 1998-99 is given bellow:

# Compared performance of Woven & Knitwear 1995-96



Compared performance of Woven & Knitwear 1996-97



#### 3.11 Government Incentives:

Considering the importance of the export-oriented sector, the Government of Bangladesh has undertaken some measures with a view to encouraging potential investors:

- a) Cash incentive on Export of RMG Knit, if Fabrics being procured from indigenous sources;
- b) A system of Back-to-Back L/C with bonded warehouse facility has been introduced with a view to reducing the cost of working capital;
- c) There is no import duty on the import of capital goods for establishing export-oriented industries;
- d) Add duties and taxes charged on imported raw materials are refundable after export of the finished products;
- e) Confessional rate of interest to finance has been introduced;
- f) No limit for Back-to-Back L/C in each of using local yarn in Knit Fabric.

  BTB L/C limit 75% in cash of imported year.
- g) Relieve Bank accepted charges on export for knit fabrics on the garment manufacturer.

### 3.12 Comparative Advantage of Bangladesh:

Garment industry is basically labor intensive. Type of skilled and semi-skilled workers needed for this industry are abundantly available in this country is also cheaper compared to the similar workers in developed and other developing countries. An international wage comparison of labor in the garment sector is furnished in Table-XIII

Table - XIII
International Wage Comparison

Country	Wage per month US\$	Bangladesh Wage lower that the others (time)
Taiwan	228	7.86
South Korea	205	7.07
Hong Kong	114	3.93
Pakistan	63	2.17
India	55	1.90
Bangladesh	29	1.00

Taiwan, South Korea and Hong Kong are the major exporters of readymade garments. The average wage per skilled workers is US\$ 228 in Taiwan, followed by US\$ 205 in south Korea and US\$ 114 in Hong Kong as compared to only US\$ 29 in Bangladesh. The average age in Taiwan about eight times, in South Korea over seven times and in Hong Kong about four times of the wage per worker in Bangladesh. The wage rate in Bangladesh is also much cheaper to those of Pakistan (US\$ 63.00) and India (US\$ 55.00).

#### 3.13 Existing Capacity:

Information collected from the Department of Textile GOB, reveals that at present there are 224 (including 202 composite) units engaged in the production of

different types of knit garments in the country. But most of them have primitive technology and a good portion of them is shut down. Although there is a good numbers of composite come into being with advanced technology in the north of Dhaka City.

The total annual production capacity of these units is used for making knitwear for export and for meeting local demand. About 75% of the requirement for knitwear exports are assumed to be met by existing units. Although the quality of the most of them is questionable and is frequently being complained by the international Buyers (the views has been taken on discussion with the local buying agents).

Consumption of fabrics is increasing on an average of 15-18% every year. But the growth tends toward the new / value added fabrics mostly. In 1998-99, the rib and interlock fabrics requirement and consumption shoot up dramatically, as the finished knit wears for ladies and children were in demand from Bangladesh. It is expected that the ladies and children wear has been in demand from Bangladesh and is just started. As such the demand for the fabrics for ladies and children wear will be geared up in future. The table below shows the fabrics requirement consumption of knitwear.

Table - XIV

Apparent consumption of fabrics by the Readymade

Knit Garment Industry

75 . 155
Total Requirement
31212
36884
46281
71257
79286
97932
109246

It may be seen from the above table that there is a regular increasing trend in the apparent consumption of fabrics by the export oriented readymade knit garment industry during the period of last years. Although, there was a increasing trend up to 1988 but afterward-apparent consumption increased drastically. However, the apparent consumption of fabrics in the year 1992 i.e. 36884 tons may be considered to be the export demand for knit fabrics by the readymade garment industry on the assumptions that the share of knitwear was 14% in 1993. Based on this, the export demand for knit and woven fabrics has been estimated at the 1400 Lac square meter and 8600 Lac square meter respectively in 1993. However, in 1998 the knit fabrics requirement rose up to 109246 tons with an increasing trend of about 15%.

### 3.14 Projected Export Demand:

The future export demand for knit fabrics and woven fabrics could be estimated on the basis of past growth of readymade garment export. During the period from 1991-1993, the growth of garment export was 30%. It is expected that the growth may decline in the future as the readymade garment industry may face stiff competition from the other developing countries of the world. Keeping it in view, growth rate i.e. 20% in case of knit fabric and 10% in case of woven fabric has been considered in the estimation of future export demand for knit and woven fabric respectively. Based on the above, the future export demand for knitwear and knit fabrics has been projected as shown in Table-XV, and shown in the charts in the following pages.

Table - XV

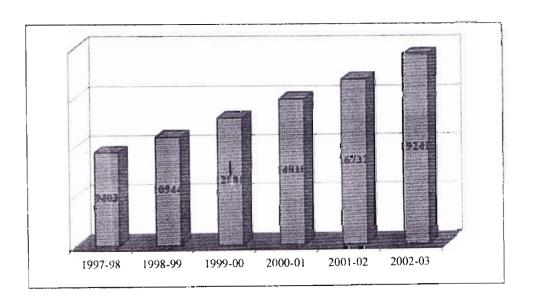
Projected of Export Demand for Knitwear & knit Fabrics

Year	Knitwear value in Cr.	Knit fabrics in Tons
1997-98	9403	109246
1998-99	10944	115400
1999-00	12881	131710
2000-01	14810	151396
2001-02	16732	174136
2002-03	10241	200247

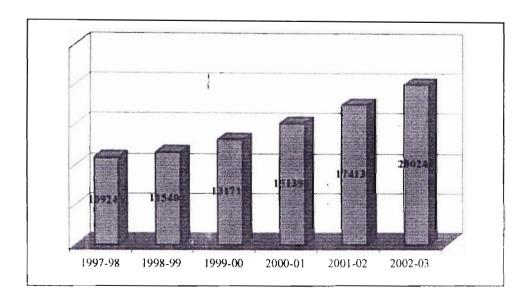
Discussion with few garment units reveals that,

- Cotton fabrics constitute 70% of the total requirement;
- Blended fabrics particularly TC fabrics constitutes 30% of the total requirement;
- Pure synthetic fabrics share is very nominal in knit sector;
- Assuming 15% growth.

### PROJECTED EXPORT DEMAND OF KNIT WEARS



# PROJECTED REQUIREMENT OF KNIT FABRICS IN M. TONS



On the basis of above assumptions, the requirement of garment fabrics has been worked as shown in Table-XVI.

Table - XVI

Requirement of garment Fabrics (Category Wise)

Year	Cotton Fabrics	TC Fabrics and Blended	Total
1997-98	76473	32774	109246
1998-99	80780	34620	115400
1999-2000	92197	39513	131710
2000-2001	105977	45419	151396
2001-2002	121895	52241	174136
2002-2003	140180	60077	200247

### 3.15 Requirement and Locally Supplied During 1999-2000 (in 00 Ton):

Although the production of knit fabrics has reached to zero gap level, apparently, the actual situation is completely different. About 60 to 70% of present production of knit fabrics is in no way stands acceptable due to the quality and obsolete technology. The factories mostly in Narayanganj region, is being toosing competitive edge, and on the way of shutting down. The more the qualitative and value added will be introduced, the more the Buyer will be attracted and thus the requirement for the knit fabrics will use, substantially. To show the trend of 1998-99 on value added fabrics' requirement is shown in the table here under (approximately in weight):

Table - XVII

Requirement / Supply Gap In % For Respective Fabrics In 1999-2000

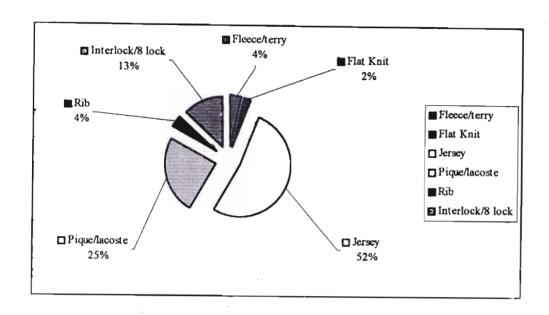
Item	Requirement	Locally Supplied	Gap	Gap In %
JERSEY	589	502	87	14.80%
PIQUE/LACOSTE	1287	214	73	25.44%
RIB	40	37	3	7.50%
INTERLOCK/8 LOCK	144	24	120	83.33%
FLEECE/TERRY	45	6	39	86.66%
FLAT KNIT	17	14	3	17.64%

The graph below shows the requirement/locally supply gap of different knit fabrics for respective categories:

Requirement and Locally Supplied During 1999-2000 (in 000'Ton)

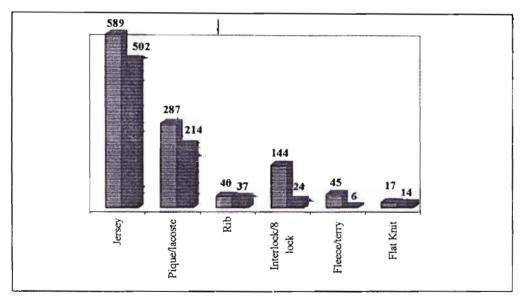
Item	Requirement	1999-2000
Jersey	589	0.52
Pique / Laciest	287	0.25
Rib	40	0.04
Interlock / 8 lock	144	0.13
Fleece / terry	45	0.04
Flat Knit	17	0.02
	1122	1

# REQUIREMENT OF KNIT FABRICS TYPES (IN PERCENT) 1999-2000



# KNIT FAB. REQD. & SUPLD. LOCALLY 1999-2000 (IN 00'TON)





#### 3.16 Export Market Supply Gap:

As stated earlier that the total export demand for fabrics by the readymade garment industry is all most 25% met through import and only 75% of it is being met from domestic source. Due to poor quality of fabrics, non-competitive prices of fabrics and failure to supply fabrics in scheduled time the composites with primitive technology will get out of the race and the gap between demand supply will be raising sharply, if new projects do not come into being. However, stiffer competition in the export of readymade garment is expected in the year future. Under this situation, the future growth in the export of readymade garment of Bangladesh is deemed black. Appropriate emphasis on the increase of the share of locally produced fabrics is not practiced. In the given situation, Bangladesh should give higher emphasis on the increase of the share of locally produced fabrics to feed the readymade garment industry for increase of higher value addition through export of readymade garments. Various incentives are being provided by the Government to rise the use of locally produced fabrics by the readymade garment industries, as much, assuming that at least 100% of the fabrics to be used by the knit readymade garment industry would be met from domestic source, the supply gap for export market is given in the Table-XVIII.

<u>Table - XVIII</u>

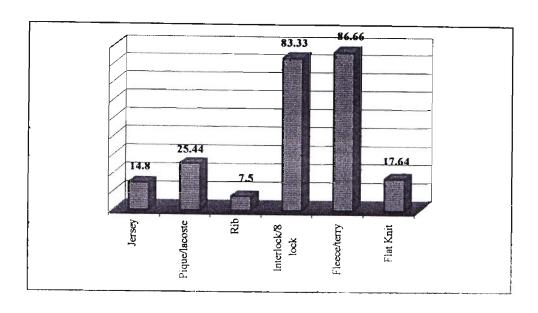
Knitwear Export Market Demand / Supply Gap

Year	Demand/Supply Gap in Lac	
1998-1999	821600	
1999-2000	36260	
2000-2001	52360	
2001-2002	75098	
2002-2003	101107	

### 3.17 Export Demand for Dyeing, Printing & Finishing Service:

Export demand for dyeing, printing & finishing service comes—from export oriented readymade garment industries. As such, the export demand for dyeing, printing and finishing service by the export oriented readymade garment industries may be estimated on the basis of quality of locally produced fabrics used by readymade garment for export purpose which is at present around 30 of the total export demand (1000 Lac sq. meter) as per ADB. The Government incentives by way of cash payment of 25% of the FOB value, duty draw back, duty tree importation of capital machinery etc. as well as development of composite textile mills (some of them with foreign collaboration and financed), the

## **DEMAND/SUPPLY GAP ON FABRICS 1999-2000**



Position of local production of fabric is likely to go up and it is expected that the use of local fabrics by RMG is expected to increase by 25% in the near future. On this basis the export demand for dyeing, printing & finishing service has been estimated as under:

Table - XIX

# Estimated of Export demand for dyeing, printing & finishing on the Basis of Fabrics Requirement by the EORMGI

Year	Fabric Requirement by RMG Industries		Fabrics Available RMG	Estimated demand for Dyein Printing & Finishing Service (2 Total)		able Printing & Finishing Service	, ,
	Knit	Woven	-	Knit	Woven	Total	
1998-99	3080	13760	16840	770	3440	4210	
1999-00	3360	14620	17980	840	3660	4500	

#### 3.18 Marketing Strategy:

#### 3.17.1 Selling Arrangement:

Export of garments is normally made through buying houses. There are about 185 buying houses representing foreign principles are now operating in Bangladesh, some buying house also maintain overseas. Besides, the marketing system of various types of garments in the world market is done through bilateral negotiation between buyers and sellers.

The exporters also market their products through appointed agents in the different countries. They also make direct contact with the international buyers through personal visit or correspondence over-telephone, telex, and fax or by participation in the international fairs, exhibitions etc. The sponsors of the proposed project will have to follow the existing marketing system and also try to obtain job orders from the buyers. However, the sponsor will be required to arrange direct orders from foreign buyers or their representative at Dhaka. Besides, attempt also required to be made by the sponsors to procure export orders through different buying houses operating in Bangladesh. It may be mentioned that the sponsors will export their products through Back-to-back LC

#### 3.17.2 Product Quality:

In the export market supply of quality product is considered to be prime determinant for successful marketing of the product. It is generally believed that the buyers do not sacrifice quality for the sake of price. As such, quality of the product must be ensured to compete in the export market. The sponsors of the project have to remain always conscious about the quality, design etc. of fabrics.

To produce qualify fabrics they are required to use proper imported and local raw materials, right type machinery and to employ experienced and skilled personnel. The quality control section of the project must be equipped with the required and necessary quality control equipment so that at every stage of production quality of the product may be ensured; otherwise it may difficult for the project to penetrate their product successfully in the international market unless quality is not maintained properly.

#### 3.17.3 Output Pricing:

Price of products in the international market is determined on the basis of demand and supply situation. The FOB price normally depends on the design, quality and size of the products. The prevailing FOB price of Bangladesh knitted wears i.e. T-shirt and polo as collected from various source are shown as following:

FOR PRICE OF PRODUCTS

Table - XX

Items of	FOB price in US\$ / Doz.		Remarks	
products	White	Colored		
a. T-shirt (Single Jersey)	14-15	18-20	FOB price of US\$ 17 may be considered for average products.	
b. Polo-shirt (Polo pique)	22-24	28-32	FOB price of US\$ 32.00 may be considered for average products.	

c. value added	÷	30-40	FOB price of US\$ 32-34 may
Ladies wear,			be considered in average.
Sport wear etc.			

#### 3.17.03 Promotion :

As the project is export oriented in nature, sales of the proposed products will be promoted through personal visit, letter correspondence with foreign buyers and participation in international fairs. Apart from these, catalogues, brochures, calendars etc. will have to be sent to the foreign buyers.

#### 3.17.04 Distribution / Marketing:

The present marketing system of readymade garments in the world market is through bilateral negotiation between buyers and sellers. The exporters also market their products through buying house / appointed agents in different countries. They also make direct contact with the international buyers through personal visit, letter correspondence and international fairs. The sponsors will follow the prevailing distribution channel.

#### 3.17.05 Raw and Packing Materials:

The projects will require both imported and local raw materials. Besides, some packing materials will also be required which will be procured locally. The project will avail bonded warehouse facility. The proposed unit will also procure raw materials from abroad against back-to-back L/C. the raw & packing materials to be required for the project and their market prices are shown in Table-XIX as followings:

## Table - XXI

## Prices of Raw Materials

SI. No.	Items	Units	Price (Eq. Tk.)
Α.			
01.	Reactive Dyes	Kg.	380
02.	Caustic Soda	Kg.	28
03.	Scouring & Wetting Agent	Kg.	63
04.	Button	Gross	25
05.	Hydrogen Peroxide	Kg.	45
06.	Softener (Urea)	Kg.	143
07.	Soda Ash	Kg.	42
В.			
01.	30s 100% combed cotton yarn	Kg.	162
02.	Sewing Thread	Cone	35
03.	Band Sticker	Doz.	2
04.	Polyphone Printed Packet	Doz.	7
05.	Printed Cartoon Box	Piece	8
06.	Detergent	Kg.	32
07.	Nylon Uni-Tape/pp band	Roll	600
08.	Neutralizing Agent	L.s.	100000
09.	Sodium Chloride (Common Salt) Kg.	Kg.	8
10.	Lining Materials	Mtr.	32

Average market price of 30s yarn is Tk.165.00 per Kg. The instant project will get cash subsidy of 25% for using local yarn conservative basis of determine the net cost.

#### 3.18 Location Advantage:

The project has been set up at Narayanganj. The site is well connected by road and all infrastructure facilities like water, power, transport, labor and communication are available there.

#### 3.19 Justification of the Program:

The proposal project is a new and unique one, although the sponsor is in the same business for more than decades successfully. Among the other units of the sponsor, they have got 6 (six) garment unit, one full-fledged garment accessories unit. Thus the Group would be in a comparative advantageous position to meet Buyers requirement from one roof. Never the less, the Group has got already set up organized manpower which will give an extra edge to the project. The recent trend on Garment sector shows clear transformation of market demand from simple item towards value added item. Specially in knit Fabrics sector value added fabrics like stripped single jersey. Double jersey, Interlock, Pique are getting more and more are becoming demanded. In finished Knit garments. Polo shirts. Fank Top, sleep wears, sports wears along with casual/fashionable wears instead of simple T-shirts, demand situation in our country rising very fast. The

order queries of embroidery works and printing works on high value knit fabrics, started coming often in recent days.

At present, the existing units of the Group catering the market of woven, jacket and jogging suit, shorts etc. The proposed project will further diversify the activities of the group. The program has taken consideration of including jacquard/auto stripped, rib and interlock circular knitting machines. High temperature and high pressure dyeing machines for dyeing light fabrics. TC and blended fabrics, and developing a full fledged finishing line with shrink control drier, compacting calendar, continuous hydro extraction with wet calendar, for better and value added production/fabrics. The existing RMG units of the group catering and supplying order of various reputed Buyers/Brands in woven sector, who often requires high value items of knit fabrics, which are, at present met through importing from other countries, although the price is higher.

In addition to the fabric making a full-fledged Garment sewing ling is being considered to be integrated. By adding a full-fledged finished garment line, our project will be enjoy followings:

- 1. Higher value addition in products.
- 2. Better control over productions.
- 3. Easy in availing incentive programs of the Govt. Bank.
- 4. Strength in research, creativity and in lab. Work.

- 5. Less investment against bigger revenue earning, better return investment.
- 6. Strong benefit from present marketing strength and strategy.
- 7. Strong edge in maintaining schedule in delivery export and producing.
- 8. Minimum overhead and promotional cost.
- 9. High image in the international market.
- 10. Full readymade garments with its own fabrics, and accessories from one roof.
- 11. Satisfy existing Buyers woven garments who purchases knit products, side by side.

60

## **Economics Aspects**

## Chapter 4

#### 4.1 Cost of the Project:

The proposed composite knit project has been designed with balance production process and capacity to enjoy the maximum cost effectiveness and aiming at catering high and medium class market. Hence, the consideration has been given to select most sophisticated machineries, as well. Another important consideration has been given in to economic size of the project to yield maximum benefit and leverage. The total cost of the fixed project has been estimated at Taka 2095.04 Lac and a networking capital of Taka 109.90 Lac. A detail of the cost estimate showing break-up under different heads has seen in Annexure-I and V. The summarized project cost is presented below:

ITEMS	TK. In Lac
LAND	130.00
LAND DEVELOPMENT	17.00
BUILDING & CIVIL	287.00
IMPORTED M/C.	1440.00
L/C, C&F, PSI, CARRYING	50.40
LOCAL MACHINERY	92.50
TRANSPORT	16.00
INSTALATION	38.50
FACTORY FURNITURE	4.90
OFFICE EQUIPMENT	5.20
PRE-OPERATION	8.64
MISC.	4 90
TOTAL FIXED COST	2095.04
INTEREST DURING CONST.	96.00
NET WORKING CAPITAL	101.59
TOTAL CAPITAL OUTLAY	2292.63

## 4.2 Means of Finance:

## Long Term Loan:

Bank Loan

: Tk. 14.67 Crore

Total Term Loan

: Tk. 14 67 Crore

Equity:

Paid-up Capital : tk.630 Crore

Total Equity : Tk.6.30 Crore

4.3 Debt-equity Ratio on Completion : 70.30

4.4 Fixed Assets Coverage Ratio : 2.30 times at 80% capacity.

Include Tk.1440.00 Lac for import of machinery Tk.50.40 Lac for pre-shipment inspection charge insurance, freight, carrying etc., i.e. totaling tk.1490.00 Lac. Total net fixed cost including local machinery and others assets comes around

1966.50 Lac.

4.5 Capital Structures:

The authorized capital and of the company will be Tk.1000.00 Lac to be extended time to time as required and paid up capital will increased time to time

4.6 Financial Evaluation:

The main assumptions of earning forecast are as follows:

(i) The factory will work on the basis of 2 shifts operation of 12! ours shift per

day for knitting & dyeing sections and 10 hours for garments section and

300 working days in a year.

Equity:

Paid-up Capital : tk.630 Crore

Total Equity : Tk.6.30 Crore

13 Debt-equity Ratio on Completion : 70.30

4.4 Fixed Assets Coverage Ratio : 2.30 times at 80% capacity.

Include Tk.1440.00 Lac for import of machinery Tk.50.40 Lac for pre-shipment inspection charge insurance, freight, carrying etc., i.e. totaling tk.1490.00 Lac. Total net fixed cost including local machinery and others assets comes around 1966.50 Lac.

#### 4.5 Capital Structures:

The authorized capital and of the company will be Tk.1000.00 Lac to be extended time to time as required and paid up capital will increased time to time.

#### 4.6 Financial Evaluation:

The main assumptions of earning forecast are as follows:

(i) The factory will work on the basis of 2 shifts operation of 12hours/shift per day for knitting & dyeing sections and 10 hours for garments section and 300 working days in a year.

## 4.7 Profitability Forecast:

Based on the assumptions, the profitability forecast may be summarized as follows:

Taka in Lac

ITEMS	2002	2003	2004	2005
CAPACITY UTILIZATION	60%	70%	80%	85%
SALES REVENUE	3222.33	4068.62	434.31	4619.24
GROSS PROFIT	956.80	1225.31	1296.05	1368.90
OPERATING PROFIT	794.40	1033.98	1092.48	1152.93
NET PROFIT BEFORE TAX	586.10	841.18	918.78	998.23
NET PROFIT AFTER TAX	586.10	841.18	918.78	998.23
RETAIN EARNINGS	586.10	841.18	918.78	998.23

## 4.8 Debt-service Coverage Ratio:

As a new project, it will enjoy tax-holiday for a period of 5 years, the debt-service coverage ratio works out on the basis of tax-holiday unit as under.

#### Ratio:

No.	ITEMS	2002	2003	2004	2005
01.	GROSS PROFIT TO SALES	30%	30%	30%	30%
02.	NET PROFIT AFTER TAX TO GROSS SALES	18.62%	20.99%	21.42%	21.84%
03.	RETURN ON INITIAL EQUITY	100.08	142.39 %	155.30 %	168.32
04.	RETURN ON INVESTMENT	30%	43%	47%	51%
05.	PROFIT TO NET ASSETS	0.3188	0.4538	0.4951	0.5365

## <u>Calculation of Debt Service Coverage Ratio</u>:

A.	Income:							
	Pre-Tax Profit	600.48	854.83	931.41	1009.87			
	Add: Depreciation/Write Off	166.78	166.78	166.78	166.78			
	Interest Expense	199.97	184.61	166.52	148.49			
	Sub Total	967.23	1206.22	1264.71	1325.14			
B.	Debt Obligation :							
	Principle payment	148.72	148.72	148.72	148.72			
	Interest Expense	199.97	184.61	166.78	148.49			
	Sub Total	348.69	333.33	315.24	297.21			
C.	Debt Service coverage (TIMES)	2.41	3.09	3.44	3.85			

#### 4.9 Break-even analysis:

The project is expected to break-even (Sales) at 41.89% of the assumed capacity utilization and 33.52% of the rated capacity at a sales value Tk.1821.20 Lac while P/V (profit volume) ratio is 35.52% of the rated capacity at a sales value Tk.4347.00 Lac. Details are shown in Annexure-XX.

1

#### 4.10 Cash Flow:

Cash flow statements based on profitability estimates are given in Annexure-XVIII. The project will have a comfortable cash position, which will enable it to repay the loan in time.

## 4.11 Financial Rate of Return (FRR):

Financial Rate of Return calculated following DCF. Technique works out at 48% (approx.), which is satisfactory. Detail calculation is shown in Annexure-XIX.

#### 4.12 Pay Back Period:

The Project's payback period is 2.5 years (approx.).

#### 4.13 Conclusion & Recommendation:

The scheme considered technically feasible, socially desirable, financially rewarding, commercially profitable, economically viable and highly suitable for Bank financing. The analysis that has been conducted thoroughly concludes that

the project would be viable if and only if we can market the product properly. Even though the financial, economic and technical aspect sounds viable, but marketing aspects would be of utmost importance just after the project starts its operation.

I can assure an investor of his/her return on this project if all the dimensions are considered very carefully and the plan is implemented properly.

٠.

## **Annexure**

## Chapter 5

The project would not only generate economic activities within itself, it will also generate economic transaction and hence, the activities of the employees be working here in the project. The economic benefits of the potential small investment surrounding the project will have the positive contribution to the national economy that has not been shown in this economic aspect chapter of this analysis.

1

#### 5.1 Employment Opportunity:

The project will require a total numbers of 632 persons of various categories. Employment opportunity will be created for skilled person as well as a good numbers of fresh and unskilled personnel in the project. Cost per employment of the generated works out to be Taka 3.23.400.

#### 5.2 Contribution to GDP:

On completion, the project will add Taka 1571.10 fac to the GDP of the country per annum as detailed in the next page.

		Figures in Lac Taka
Α.	Sales (4th year)	4619.24
B.	Less (Inter Firm Transactions)	
	Raw Materials	2984.34
	Store & Spares	30.65
	Water, Power, Fuel, Gas	80.75
	Repair & Maintenance	30.65

RENT, TAX	3.00
POSTAGES, TELEPHONES ETCS.	4.20
STATIONAERIES & PRINTING	2.20
INSURANCE	8.90
AUDIT FEES/CONSULTANT	1.20
TRAVELLING & CONVEYANCE	3.00
ADVERTISEMENT/PROMOTION	5.00
BANK CHARGES	92.38
COMMERCIAL	1.75
H.O. RENT, FUEL, UTILITY, CAR MAINT., CARRYING	6.60
OTHERS TOTAL COST OF OPERATION	4.30

## CONTRIBUTION TO GDP (A-B) = TK 15.71 CRORE

## ANNEX - 1

## PROPOSED PROJECT COST

ITEMS	PROJECT	LOCAL	FOREIGN
	COST	CURRENCY	CURRENCY
LAND	130.00	130.00	0.00
LAND DEV.	17.00	17.00	0.00
BUILDING & CIVIL	287.00	287.00	0.00
IMPORTED M/C	1440.00	0.00	1440.00
L/C, C&F, PSI, CARRYING	50.40	50.40	0.00
LOCAL MACHINERY	92.50	92.50	0.00
TRANSPORT	16.00	16.00	0.00
FACTORY FURNITURE	4.90	4.90	0.00
OFFICE EQUIPMENT	5.20	5.20	0.00
PRE-OPERATION	8.64	8.64	0.00
MISC.	4.90	4.90	0.00
TOTAL	2095,04	655.04	1440.00

.INVEX-II

## PROPOSED PROJECT FINANCING

1

ITEMS	PROJECT COST	BANK PORTION	EQUITY PORTION
LAND	130.00	0.00	130.00
LAND DEVELOPMENT	17.00	0.00	17.00
BUILDING & CIVIL	287.00	200.90	86.10
IMPORTED M/C	1440.00	1152.00	288.00
L/C, C&F, PSI, CARRYING	50.40	40.32	10.08
LOCAL MACHINERY	92.50	55.50	37.00
TRANSPORT	16.00	6.40	9.60
INSTALATION	38.50	11.55	26.95
FACTORY FURNITURE	4.90	0.00	4.90
OFFICE EQUIPMENT	5.20	0.00	5.20
PRE-OPERATION	8.64	0.00	8.64
MISC.	4.90	0.00	4.90
TOTAL	2095.04	1466.67	628.37

ANNEX - III

#### **SALES MATRIX**

ITEM	DOZ./DAY	PRICE	US\$/DAY	DZ/YR	VALUE
T-SHIRT	400	17	6800	120000	2040000
POLO SHIRT	400	28	11200	120000	3360000
VALUE ADDED ITEM (BABY, LADIES)	400	32	12800	120000	3840000
SUB TOTAL			30800	360000	9240000
VALUE TK. IN LAC			15.86		4758.60
TOTAL IN LACK TK. AT 100% EFFICIENCY				4758.60	

#### **ASSUMPTIONS:**

- a. Internal fabrics would produce entire Garments.
- b. The excess fabrics / fabrics production will be kept for selling outside or the capacity to be utilized for meeting outside requirement. Which has not been included in the study for simplification of calculation.
- c. Cash incentive has been kept at the rate of 20% instead of 25% in the sales revenue and as well as in the calculation. The balance kept with an apprehension to meet up of misc. expenditure and marketing/selling commission
- d Incase of withdrawn of eash incentive, Indian yarn would be used which will not effect the calculation.

## SALES ESTIMATE

ITEM	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR
RATED CAPACITY				
RMG DOZ.	360000	360000	360000	360000
CAPACITY UTILIZATION %	60	75	80	85
PRODUCTION	216000	270000	288000	306000
ADD OPENING STOCK OF WIP FOR 3 DAYS	-	2160	2722	2907
LESS CLOSING STOCK OF WIP FOR 3 DAYS	2160	2722	2907	3089
QUANTITY AVAILABLE FOR SALE	213840	269438	287814	304818
ADD OPENING STOCK OF FG FOR 15 DAYS	-	10692	12937	13744
LESS CLOSING STOCK OF FG FOR 15 DAYS	10692	12937	13744	14604
QUANTITY TO BE SOLD	203148	256501	274071	291214
SALES TURNOVER IN LAC TK.	2685	339t	3623	3849
CASH INCENTIVES	537.06	678	725	770
NET SERVICE INCOME	0	0	0	0
DIRECT SALES TURNOVER	3222	4069	4347	4619
SUBCONTRACT (AT CAPACITY)	0	0	0	0
TOTAL SALES TURNOVER	3222	4069	4347	4619



#### **ASSUMPTIONS ON SALES ESTIMAT**

- 1. OPERATIONING TIME:
  - I. SINGLE SHIFT OPERATION OF 12 HOURS EACH PER DAY FOR READY MADE GARMENTS PRODUCTION.
  - II. TWO SHIFT OPERATION OF 12 HOURS A DAY FOR FABRICS MAKING AND FINISHING SECTION.
- 2. PRODUCTION PERIOD: 300 DAYS A YEAR.
- 3. ANNUAL RATED CAPACITY:

T-SHIT = 80,000 DZ. COTTON, 40,000 DZ, T/C = 120,000 DOZ.

POLO = 100,000 DZ. COTTON, 20,000 DZ. T/C = 120,000 DOZ.

HIGH VALUE = 80,000 DZ. COTTON, 40,000 DZ. T/C = 120,000 DOZ.

LADIES, SPORTSWEAR ETC.

(30% WHITE, 70% COLOR)

- 4. ASSUMED CAPACITY OF UTILIZATION: 60%, 75%, 80%, 85% IN THE 1ST. 2ND, 3RD, 4TH YEAR OF PROJECTED OPERATION.
- WORK IN PROCESS: 3 DAYS.
- CLOSING STOCK: 15 DAYS.
- 7. CASH INCENTIVES: TAKEN ACCOUNT 20% INSTEAD OF 25% OF THE VALUE OF SALES TURN OVER
- 8. THE BALANCE CASH INCENTIVES 5% (25-20) ASSUMED TO BE SPENT FOR SALES COMMISION AND MISC. EXPENSES.
- 9. SERVICE INCOME WILL COME FROM EXCESS DYEING AND FINISHING PROCESS UTILIZATION FOR OTHER ORGANIZATIONS NOT INCLUDED.

## **EARNING FORECAST**

ITEM	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR
SALES REVENUE	3222.33	4068 62	4347 31	4619.24
VAT	0	0	0	0
COST OF GOODS SOLD	2265.53	2843.31	3051.26	3250.34
REFUND OF VAT	0	0	0	C
GROSS PROFIT	956.80	1225.31	1296.05	1368 90
GENERAL, SELLING AND ADMINISTRATIVE EXPENSES	162 40	191.33	203 57	215 97
OPERATING PROFIT	794.40	1033.98	1092.48	1152.93
INTEREST EXPENSES	208.30	192.80	173.70	154.70
NET PROFIT BEFORE TAX	586.10	841.18	918 78	998 23
INCOME TAX	0	0	0	O
NET PROFIT AFTER TAX	586 10	841.18	918 78	998 23
DIVIDEND				
RETAIN EARNING	586 10	841.18	918 78	998.23

#### ANNEX - VII

## **ESTIMATE OF WORKING CAPITAL REQUIREMENT**

(In '000 TK.)

ITEM	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR
INVENTORIES:				
IMPORTED RAW AND PACKING MATERIALS 0 DAYS	0	0	0	0
LOCAL RAW AND PACKING MATERIALS 10 DAYS	6294.0	9587.6	10255.8	10923.1
WORK-IN PROCESS 2 DAYS	1556.8	1917.5	2051.2	2184.6
FINISHED GOODS 7 DAYS	5412.5	6666.6	7121.2	7595.2
EXPENSES:				
A. WAGES AND SALARY 1 MONTH	1796.5	1976.2	2173.8	2391.1
B. OTHER EXPENSES   MONTH	742.3	1034.8	1195.9	1357.1
C. ACCOUNT RECEIVABLES 7 DAYS	7518.8	9493.4	10143.7	10778.2
GROSS WORKING CAPITAL	23320.9	30676.1	32951.5	35229.5
LESS ACCOUNTS PAYABLE 7 DAYS	5286.2	6634.4	7119.6	7584.1
WORKING CAPITAL	18034.7	24041.7	25831.9	27645.3
LESS: DEPRECIATION	209.1	257.5	275.5	293.4
IN THE VALUE OF WIP & FG 9 DAYS				
WORKING CAPITAL	17825.6	23784.2	25556.4	27352.0
LESS : INVENTORY FINANCE BY BACK TO BACK L/C	11412.4	14409 7	15396.7	16359 8
NET WORKING CAPITAL	6413.2	9374.5	10159.7	10992.1

#### ANNEX - VIII

## COST OF GOODS SOLD STATEMENTS

ITEM	IST YEAR	2ND YEAR	3RD YEAR	4TH YEAR
RAW & PACKING MATERIALS	188820.98	236026.22	251761.30	267496.38
WAGES & SALARIES	18216.00	20037.60	22041.36	24245,50
STORES & SPARES	0	1532.5	2298.75	3065
REPAIR & MAINTENANCE	766.25	1532.5	2298.75	3065
CARRIAGE INWARD	830.00	1048 00	1118,00	1189.00
INSURANCE	890.50	890.50	890.50	890.50
WATER, POWER, FUEL, LUB.	6420.53	7413.66	7744.70	8075 75
DEPRECIATION	17178	17178	17178	17178
MISC.	400	413	425	438
TOTAL MANUFACTURING COST	233522.25	286071.98	305756.36	325643.13
ADD OPENING STOCK OF WIP (2 DAYS)	0	1557	1918	2051
TOTAL WORK IN PROCESS	233522.2537	287629	307674	327694
LESS CLOSING STOCK OF WIP (2 DAYS)	1557	1918	2051	2185
TOTAL COST OF GOODS MANUFACTURED	231965	285711	305623	325510
ADD OPENING STOCK OF FG (7 DAYS)	0	5413	6793	7290
TOTAL GOODS AVAILABLE FOR SALES	231965	291124	312416	332799
LESS CLOSING STOCK OF FG (7 DAYS)	5413	6793	7290	7763
TOTAL COST OF GOODS SOLD	226553	284331	305126	325034

## ANNEX - IX

## RAW MATERIALS ESTIMATES

ITEM	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR
AT ATTAINABLE CAPACITY	339773081	339773081	339773081	339773081
CAPACITY UTILIZATION	60%	75%	80%	85%
AT CAPACITY UTILIZATION	203863849	254829811	271818465	288807119
STOCK (10 DAYS)	6795462	8494327	9060615	9626904
TOTAL REQUIREMENT OF RAW MATERIALS AT CAPACITY UTILIZATION	210659310	263324138	280879080	298434023

## ANNEX - X

## **RAW MATERIALS**

A. YARN			
ITEM	PRICE TK/KG.	QTY.KG.	TOTAL
YARNS. AV. 30S	175.95	1265400	222647130

B. OTHER YARN/YARN DYE SERVICE CH.	ARGES		
SERVICE CHARGE FOR YARN DYE	125	60000	7500000
LYCRA YARN	569	14100	8026425

C. CHEMICAL			
ITEM	PRICE TK/KG.	QTY.KG.	VALUE
SODA (ASH)	12	222834	2674007
SALT	4	506697	2026788
HYDROZENPEROXIDE	28	103925	2909902
BLEACHING POWDER	20	1185	23702
SANDOPAN L.F.W.	180	3266	587896
STABLIZER - SIFA	180	10479	1886165
TINOFIX - ECO	385	249	96055
ANTIMUSSOL, H.T.S.	300	2586	775696
CERANINE - H.T.S.	240	5897	1415304
CERANINE - N.C.	160	3742	598783
GANDOPAR - R.S.K.	180	2313	416426
ACCTIC ACID	70	17328	1212988
CAUSTIC SODA	24	15854	380499
SOLPHER BLACK - BR	80	16330	1306435
BLUE TONE - BUB	400	86	34475
SODIUM	20	28011	560225
REACTIUE BLUE 194	420	885	371517
SIRRIX 2UD	125	6804	850543
SYNO WHITE GLAGE	340	2132	724890
EMACOL J.N.	125	8052	1006476
MELAVEL LAF	170	998	169655
ARRISTON 45, AND SOFTNER FI-C, ETCS.			2065800
	TOTA	AL AT 100%	22094228
	10000	WASTAGE	1767538
			23861767

D. DYES			
ITEM	PRICE/AV.	QUANTITY	VALUE
EV : BLUE SP/BR			
EV : YELLOW - 4GL			
EV : RED - HE - 7B			
EV : ORANGE - HER			
EV : NBLUE - BER			
EV: T/BLUE - G -			
M/P - NAVY - FNS			
SUP - RED - 7BX			
EV:BLACK-B-			
REACTINE OR MEZRL -			
EV: BLACK - GR -			
EV : RED - 3BS			
EV: ORANGE - 3R -			
DR YELLOW - K2R			
DR : BLUE K2RL			
DR : RED - K4B3			
DR N/BLUE-K2B			_
EV : YELLOW BRL			
M/P - BLACK - FDN			
M/P : ORANGE F2GR			
M/P : RED FBGE -			
CIBA - YELLOW - FN - ZR			
CIBA - RED - FNR			
CIBA - BLUE - FNR			
CIBA - BLUE - FNR			
CIBA YELLOW - WR			
CIBA RED - WB -			
CIBA - NAVY WBT -			
TOTAL AT 100%			13098370
WASTAGE			1047870
			14146239

## **ACCESSORIES**

ITEM	QUANTITY	PRICE	VALUE
BUTTON, G.GROSS	7333	300	2200000
SEWING THREAD, CONE	10500	35	367500
NYLON UNITAPE, ROLL	2300	600	1380000
BAND STICKER, DOZ.	396000	2	792000
POLYTHENE PRINT PACKING	396000	7	2772000
PRINT CARTOON BOX, PCS.	16500	8	132000
LABEL, HANG/PRICETAG ETC.	396000	48	19000000
OTHERS			720000
TOTAL AT 100%			27371500
			27371500

## PACKING MATERIALS

PACKING MATERIALS 0.2% OF SALES	996900

## **WATER, POWER, FUEL, GAS:**

## WATER:

A. DAILY REQUIREMENT	50000 LITERS OF WATER REQUIRED PER DAY FO THE PROJECT TO BE MET UP BY PROJECTS OW DEEP TUBEWELL AND WATER RESERVIOR						
B. POWER	THE PROJECT WILL HAVE ITS OWN POWER GENERATING SYSTEM. A GAS OPERATED GENERATOR WITH A CAPACITY OF 400-500 KVA WILL BE THERE IN THE PROJECT TO SUPPLY POWER FOR THE PROJECT.						
C. GAS	ARROUND 400 CBM/H REQUIRED FOR TH MACHINERIES/EQUIPM PRESENT RATE OF TH OR TK.51,60,000/- YI AVERAGE FOR GAS CO	IE PROJECTS MENT OPERA' K.4/- PER CBM EAR IS EARM	BOILER AND FION AT THE 430,000/- MONTH IARKED IN AN				
D. DISEL/FUEL, LUBRICA	NT:						
ITEM	QUANTITY/KG.	RATE	TOTAL				
GREASE	1600 KG	160	256000				
LUBE OIL	4200 LTR	38.4	161280				
MACHINE OIL	8000 LTR 14 112000						
PETROL/DISEL	68000 LTR	13.7	9316				
			1460880				

#### TOTAL WATER, POWER, FUEL, GAS CONSUMPTION

ITEM	<b>IST YEAR</b>	2ND YEAR	3RD YEAR	4TH YEAR
CAPACITY	60%	75%	80%	85%
WATER	-	-	-	-
POWER	2448000	2448000	2448000	2448000
GAS	3096000	3870000	4128000	4386000
DIESEL, FUEL, LBRICANT	876528	1095660	1168704	1241748
TOTAL UTILITY	6420528	7413660	7744704	8075748

## **STORE & SPARES:**

FOR MACHINERY	0	1532500	2298750	3065000

#### REPAIR & MAINTENANCE:

A THE SALVES OF THE SECURITY AND ADDITIONAL SECURITY A	The second second	2000201100	70000000000000000000000000000000000000	economica de la composición dela composición de la composición dela composición de la composición de l
MACHINERY BUILDING	766250	153500	2298750	3065000

## **RENT, TAX, INSURANCE:**

890500	890500	890500	890500

## ANNEXURE - XI

## WAGES & SALARY

GARMENT SECTION	NOS	Wg/m	YEARLY	Ist YEAR	2nd YEAR	3rd YEAR	4th YEAR
OPERATO/HELPER	400	1800	8640000	8640000	9504000	10454400	11499840
KNITING ROOM	14	1500	252000	252000	277200	304920	335412
FINISHING ROOM	30	1500	540000	540000	594000	653400	718740
A L. MC	1	25000	300000	300000	330000	363000	399300
DOOR IN CH.	2	6000	144000	144000	158400	174240	191664
C/Q	20	3000	720000	720000	792000	871200	958320
SUPERVISORS	12	4000	576000	576000	633600	696960	766656
KNITTING MASTER	1	15000	180000	180000	198000	217800	239580
PATTERN/SAMPLE	1	12000	144000	144000	158400	174240	191664
N IN CH	1	10000	120000	120000	132000	145200	159720
MECHANIC/ASST.	2	10000	240000	240000	264000	290400	319440
TK.IN 1000			11856				
KNITTING SECTION	1						
PTR /HELPER	20	2500	600000	600000	660000	726000	191664
KNIT MASTER	i	20000	240000	240000	264000	290400	159720
SUPERVISOR	4	6000	288000	288000	316800	290400	31944()
TK. IN '000	-		1128				
DYEING/FINISHING SECTION	ON						
PTR/HELPER	40	2000	960000	96(3(3)0	1056000	(161600)	(27776)
DYE MASTER	1	60000	720000	720000	792000	871200	958320
ASST DYE MASTER	1	15000	180000	(80000)	198000	217800	239580
N IN CH.	1	8000	96000	96000	105600	116160	127776
SUPERVISOR (DYE&FIN.)	6	6000	432000	432000	475200	522720	574992
AB IN CH & ASST	2	8000	192000	192000	211200	232320	258552
TK IN 1000			2580	15564	17120.4	18832.44	20715.684
TOTAL FACTORY WAGES			15564	15564	17120.4	18832.44	20715.684

#### SALARY, FACTORY

#### FACTORY O/H SALARY

			1686000	1686000	1854600	2040060	2244066
MSSNGR	3	2500	90000	90000	99000	108900	119790
QUALITY CONTROLLER	1	40000	480000	480000	528000	580800	638880
JR. MERCHANDISER	2	5000	120000	120000	132000	145200	159720
MERCHANDISER	2	12000	28000	288000	316800	348480	383328
MARCH/MKT MGR	1	35000	420000	420000	462000	508200	559020
MKT EXECUTIVES	2	12000	288000	288000	316800	348480	383328
BUYING / MARKETING							
			1656000	1656000	1821600	2003760	2204136
MSSNGR.	2	2500	60000	60000	66000	72600	79860
TYPIST	1	3000	36000	36000	39600	43560	47916
COMPUTER OP.	J	6000	72000	72000	79200	87120	95832
PURCHASE OFFICER	1	8000	96000	96000	105600	116160	127776
A/C MGR/EXECUTIVE	2	18000	432000	432000	475200	522720	574992
CHIEF EXECUTIVE	1	80000	960000	960000	1056000	1161600	1277760
GENERAL, ADMIN.							
SALARY GENERAL, SELI	JNG, AI	DMIN.					
TOTAL FACTORY WAGES,	O/H	18216	18216	20037.6	22041.36	24245.496	
FACTORY O/H & SALAR	Y		2652	2652	2917.2	3208.92	3529.812
GENERAL LABOR	30	1500	540000	540000	594000	653400	718740
STAFFS	6	2500	180000	180000	198000	217800	239580
A/C	2	4000	96000	96000	105600	116160	127776
STORES	4	4000	192000	192000	211200	232320	255552
SECURITY	16	2500	480000	480000	528000	580800	638880
ASST, M. ENGR.	1	6000	72000	72000	79200	87120	95832
MAINT ENGR	1	,15000	180000	180000	198000	217800	239580
SHIFT IN CHARGE	2	8000	192000	192000	211200	232320	255552

<sup>\*\*\*</sup> ANNUAL INCREMENT 10%

#### ANNEXURE - XII

## GENERAL AND ADMINISTRATIVE OVERHEAD

In '000 Tk.

ITEM	1st YEAR	2nd YEAR	3rd YEAR	4th YEAR
SALARY & OTHERS	3342.00	3676.20	4043.82	4448 20
ENTERTAIN	240.00	240.00	240.00	240.00
PRINT POST STAMP	180.00	180.00	180.00	180.00
AD/PROMOTION	400.00	400.00	400.00	400 00
DONATION	100.00	100.00	100 00	100 00
MKT/SALES COMMISSION	3222.33	4068.62	4347.31	4619.24
SUPPLIES	220	220	220	220
TEL./FAX	240	240	240	240
FUEL/DIESEL	300	300	300	300
RENT (OFFICE)	300	300	300	300
UTILITIES (OFFICE)	120	120	120	120
CARRYING	120	120	120	120
CONVEYANCE/TA/DA	240	260	280	300
CAR MAINT	120	120	120	120
CONSULT./ADVISER	60	60	60	60
LEGAL	60	60	60	60
COMMERCIAL	175	175	175	175
BANK CHARGES	6444.67	8137.24	8694.61	9238 49
DEPRECIATION	116	116	116	116
MISC.	240	240	240	240
1.14	16240.00	19133.06	20356.74	21596.93

# **DEPRECIATION CALCULATION**

TOTAL	17178000	17178000	17178000	17178000
EQUIPMENTS 20%				
FURNITURE/	418000	418000	418000	418000
5%				
BUILDING	1435000	1435000	1435000	1435000
10%				
MACHINERY	15325000	15325000	15325000	15325000

#### ANNEX - XIII

## REPAYMENT SCHEDULE OF PROJECT LOAN

PRINCIPAL INITIAL		PRINCIPAL PAYMENT YEARLY	INTEREST PAYMENT	INT. YEARLY	PERIOD
1466.67	73.33	146.67	95.33	185.90	İst
	73.33		90.57		2nd
	73.33	146.67	85 80	166.83	3rd
	73.33		81.03		4th
	73.33	146 67	76 27	147.77	5h
	73.33		71.50		6th
	73.33	146.67	66.73	128 70	7th
	73.33		61.97		8th
	73.33	146.67	57.20	109 63	9th
	73.33		52.43		10th
	73 33	146.67	47.67	90 57	11th
	73.33		82.90		12th
	73.33	146.67	38.13	71.50	13th
	73.33		33,37		14th
	73.33	146.67	28.60	52,43	15th
	73.33		23.83		16th
	73.33	146.67	19.07	33.37	17th
	73.33		14 30		18th
	73.33	146.67	9.53	14,30	19th
	73.33		4.77		20th
	1466.67	1466.67	1001.00		

## **ASSUMPTION:**

- 1. INTEREST YEARLY 13%, HALF YEARLY 6.5%
- 2 10 YEARS REPAYMENT SCHEDULE.
- 3. REPAYMENT IN HALF YEARLY BASIS FOR 10 YEARS
- 4 HALF YEARLY REPAYMENT.

## ANNEX - XIV

## REPAYMENT SCHEDULE OF I.D.C.P.

PRINCIPAL INITIAL		PRINCIPAL PAYMENT YEARLY	INTEREST PAYMENT	INT. YEARLY	PERIO
96.00	4.80	9.60	6.24	12.17	lst
	4.80		5.93		2nd
	4.80	9 60	5.62	10.92	3rd
	4.80		5.30		4th
	4.80	9.60	4.99	9.67	5h
	4.80		4.68		6th
	4.80	9.60	4.37	8.42	7th
	4.80		4.06		8th
	4.80	9.60	3.74	7.18	9th
	4.80		3.43		10th
<u> </u>	4.80	9.60	3.12	5.93	l l th
	4.80		2.81		12th
	4.80	9.60	2.50	4.68	13th
	4.80		2.18		14th
	4.80	9.60	1.87	3,43	15th
	4.80		1.56		16th
	4.80	9.60	1.25	2.18	17th
	4.80		0.94		18th
	4.80		0.62		19th
	96.00	96.00	65.52	- Hart F	

## ASSUMPTION:

- 1. INTEREST RATE YEARLY 13%. HALF YEARLY 6.5%
- 2 10 YEARS REPAYMENT PERIOD.
- 3 REPAYMENT IN HALF YEARLY BASIS

#### ANNEX - XV

## ESTIMATED FINANCIAL EXPENSES

## **INSTALMENT OF PRINCIPAL PAYMENT**

	1st year	2nd year	3rd year	4th year	5th year	6th year	7th year	8th year	9th year	10th year
Project Loan	146.67	146.67	146.67	146.67	146.67	146.67	146.67	146.67	146.67	146.67
IDCP	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60
Total	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3	156.3

ANNEX - XVI

## ESTIMATED FINANCIAL EXPENSES Contd.

## INTEREST PAYMENT

	1st year	2nd year	3rd year	4th year	5th year	6th year	7th year	8th year	9th year	10th year
Project Loan	185.90	166.83	147.77	12 <b>к</b> .70	109.63	90.57	71.50	52.43	33.37	14.30
(DCP	12.17	10.92	9.67	8.42	7.18	5.93	4.68	3.43		
Com. Bank Borrowing	10.26	15.00	16.26	17.59	19.2387	19.2387	19.2387	19.2387	19.2387	19.2387
Total	208.3	192.8	173.7	154.7	136.0	115.7	95.4	75.1	54.8	34.5

#### ANNEX - XVII

## CAPITAL (IMPORTED) MACHINERY LIST

KNITING SEC.	SPEC.	NOS.	BRAND/COUNTRY
Single Jersey Machine	18**2*24 G	I	MV-3.2. Mayer & Cic
4 Cam Tracks Suitable for production	20**2*24	1	Germany
of s.jersey. pique, 2 thread fleece	G	I	MV-3.2. Mayer & Cic.
and mechanical stripe	22"*2*24*	1	Germany
all Machine with standard equipment	G	l	MV-3.2, Mayer & Cic
including:	24"*2"24	Į.	Germany
- modular side creels fully tubed	G		MV-3.2, Mayer & Cic
- inverter	26"*2*24		Germany
- lubrication Uiwave/Pulsonic	G		Relanit, Mayer & Cic
- computer in main panel for control	30**2*24		Germany
- positive storage yar feeding device	G		Relanit, Mayer & Cic
meminger			Germany
-groz-beckert needles, liebers sinkers			
- centralized stich control			
- detector / lighting			
SPARE			
26" & 30" M/C with Lycra attachment			
Additional Cylinder of 28 Gauze for 30" Dia			
Rib Machnes:	30``*16'' G		2 OVJA, Mayer & Cic. Germany
One Cam Track with Two Cam Tracks	34``*16`` G		
Capacity Both in Cylinder and Dial			
for production of 1*1, 2*2 rib, milano rib			
rib with lyra fabricsStandard Equipments with:			
- kit lycraon alternet feed			
- modular side creels fully tubed			
~ inverter			
- lubrication Uiwave/Pulsonic			
- computer in main panel for control			
- positive storage yar feeding device			
meminger			
- groz-beckert needles			
- centralized stich control			
- detector/lighting			
Interlock Machine	30"*22" G	1	OVJA Mayer & Cic. Germany
4 cam Tracks on cylinder and 2 on dial	34"*22" G	1	OVIA, Mayer & Cir. Germany
suitable for production of 8-lock, interlock			
puntoroma, milano rib, swiss rodio, interlock			
pique, crepon and 3 color jacquqrds			
Standard Equipments with:			

kit lycraon alternet feedmodular side creels fully tubed

- im erter
- Iubrication Uiwave / Pulsonic
- computer in main panel for control
- positive storage yarn feeding device meminger
- groz-beckert needles
- centralized stich control
- detector/lighting

Auto Striper:

3 Cam Track suitable for production of 4 color stripe of single jersey, pique, and 2 thread fleece

Standard Equipments with:

- Electronically programablestriper
- 4 groups 1 per color having independent tapper / cutter
- striping control & pre programming panel
   modular side creels fully tubed
- -inverter
- lubrication Uiwave/Pulsonic meminger
- gro/-beckert needles, licbers sinkers
- centralized stich control
- detector/lighting

#### FLAT KNIT MACHINE:

3 Carriage full computerized Flat Knit

2 Protti Italy

Machine for production of collars and cuffs

Air Compressor SCREW TYPE

1 UK.

Air Compressor

15 HP

1 Korean/Tarwan Origin

30°\*3"24 G

#### LABORATORY SECTION:

Electronic Balance, Cutter etc.

Lab Aparatus

Spectometer with Computer

Software

Color Fastness to rubbing

Color Fastness to Light

Color Fastness to Wash

Srikage Testing with Washing

M/C & Tumble Drier

Fotor Machine Cabina:

12 Port Labdip

Yarn Tension M-C

SDL International, USA

Mayer & Cic. Germany or

Orngio, ITALY

## DYEING SECTION:

High temp/High Presure Dyeing M/C:

Sample Dye Capacity/Batch	50 KG/2 CHM	1	Eco. Soft Plus, Thies, Germany
Capacity/batch	360 KG	T	Eco Soft Plus, Thies, Germany
Capacity/batch	540 KG	I	Eco Soft Plus, Thies, Germany
Capacity/batch	720 KG	F	Eco. Soft Plus, Thies, Germans

#### The machines included

-extra hot water tank w/auto filling device

- 135\*-145\*f temp beatingcooling
- central controller
- operators platform

#### FINISHING SECTION:

Dewatering Sequizing Balooning machine	Width 1200-	I	Calator, Germany or Bianco
(for hydro extraction 7 wet compaction)	1400 mr		Italy
with Turntable			
Tension less Drier	2/3 chamber	l	Rukh, Germany
	2.5 M		
Compacting calender	Width 1200	1	Tubetex. USA
With heat/thermal setting option	400m		
Inspection Machine with Plaitor		[	Calator, Germany

GARMENT SEC	NOS.	
ITEM	84	BROTHERS, JAPAN
PLAIN SINGLE NDL	5	BROTHERS, JAPAN
2 NDL SPLITBAR	4	PEGASUS, JAPAN
3 TRD OVER LOCK	42	PEGASUS, JAPAN
4 TRD OVERLOCK	(	PEGASUS, JAPAN
5 TRD OVERLOCK	18	PEGASUS, JAPAN
FLATLOCK F/BED	8	PEGASUS, JAPAN
KANSAIPMD	2	KANSAI, JAPAN
LAPSEAM/BACKTAPE	2	PEGASUS, JAPAN
PICOTING	1	PEGASUS, JAPAN
BARTRACKER	l	BROTHERS, JAPAN
BUTTON HOLE	2	BROTHERS, JAPAN
BUTTON STITCH	2	BROTHERS, JAPAN
RIBCUTTING	2	EASTMAN
CLOTH CUTTING	2	EASTMAN
BOILER W/SOFTNER	1	NAOMOTO, JAPAN
IRON	12	
VACCUM TABLE	8	NAOMOTO, JAPAN
CARD PUNCHING SET	L	

AUSILIARY:			
BOILER	5000 KG	1	LOOS, UK
GENERATOR GAS OPERATED	400-500 KVA	1	CATER PILLER, UK



# LIST OF LOCAL MACHINERY & EQUIPMENT

SI. No.	Description of Machinery	Quan -tity	Estimate d/Unit Cost	Total Cost in '000' Taka
1.	Sub-station Equipment including 500 KWLT switch gear PFI Plant.	l set	1,200	1,200
2.	Cable and Bas Bar Trucking and lighting	1 set	800	800
3.	Deep tube well with pump, motors and other attachments	2 sets	1,000	1,000
4.	Weighing Scales	20 sets	100	200
5.	S.S. Trolley	2 sets	35	700
6.	Lathes, Workshops	1 lot	75	150
7.	Steam & water piping with steam trap, valves	1	1,000	1,000
8.	Pressure vessel pump, motors and other attachments and total water supply	Full	300	300
9.	Effluent/Waste Water Treatment Plant with Waste water drainage system	1 lot	2,500	2,500
10.	Fire fighting equipment including CTC gas bottles, buckets, ladder hose pipe, blankets etc.	l lot	200	200
11.	Security instrument including Alarms, Sensor device etc.	1 lot	150	150
12	Cleaning equipment including vacuum cleaner, Sprayer etc.	1 lot	200	200
13.	Stainless & ms piping material	1 lot	600	600
14.	Transportation Placing	1 lot	100	100
15.	Miscellaneous	1 lot	150	150
	Total			9,250

#### ANNEX - XVX

#### **ERECTION AND INSTALLATION COST**

- 1 ERECTION TECHNICAL EXPATRIATE (FROM MANUFACTURER OF MACHINERY)
- A. KNITING MACHINES (MAYER & CIE) 2 PERSONS 10 DAYS
- B. DYEING MACHINES (SCHOOL, SWITZERLAND) 2 PERSONS 30 DAYS = 30
- C FINISHING MACHINES (MONTL ITALY) 2 PERSONS 30 DAYS = 30

#### COSTING:

!	70 DAYS ACCOMODATION	= TK 6.75 LAC
2	TECHNICAL PERSON'S POCKET EXPENS	= TK, 5.00 LAC
3.	GAS LINE INSTALLATION	= TK 14.25 LAC
4.	ELECTRICAL LINE INSTALLATION	= TK. 4.50 LAC
5	LOCAL ERECTION AND INSTALLATION	= TK, 5.00 LAC
6	MISC	= TK 3 00 LAC

TOTAL = TK. 55.00 LAC

ANNEX - XX

## OFFICE EQUIPMENT

(.000)

SL. NO.	DESCRIPTION OF ITEM	UNIT	QUTY.	UNIT PRICE IN TK.	TOTAL
i.	CALCULATO	NO.	6	700.00	4.2
2.	TELEPHONE WITH INTERCOM 1+5	NO	1	40,000.00	40
3	TELEPHONE ISD	NO.	1	35,000.00	70
4.	FAX MACHINE	NO	1	25,000.00	25
5.	EXECUTIVE CHAIRS, TABLES	NO.			85
6.	FIRE EXTINGUISHER	NO.	2	5,000.00	10
7.	CEILING FAN	NO.	10	1,500.00	15
8	AIR CONDITIONER	NO.	3	40,000.00	120
9.	COMPUTERS WITH PRINTERS	NO.	2	60,000.00	120
10.	FIRST AID BOX	NO.	1	1,400.00	1.4
11.	EXHAUSAT FAN	NO.	6	1,500.00	9
12.	OTHERS	NO.		ire di	20,4
				TOTAL	520

## ANNEX - XXI

## **FACTORY FURNITURES**

(,000)

SL. NO.	DESCRIPTION OF ITEM	UNIT	QUTY.	UNIT PRICE IN TK.	TOTAL
1.	TABLE (MANAGEMENT)	NO	4	5,000.00	20
2.	TABLE (VISITOR)	NO	1	5,000.00	5
3.	CHIRE (VISITOR)	NO.	5	1,000.00	5
4.	CHIRE (MANAGEMENT)	NO.	4	3,000.00	12
5.	CUTTING AND FINISHING TABLE	NO.	6	20,000.00	120
6.	OPERATORS TOOLS/MACHINIC TOOL	NO.			25
7.	TELEPHONE	NO.	1	40,000.00	40
8.	LONG TABLE (WOODEN)	NO.	6	6,000 00	36
9.	WOODEN BOX	NO.	100	500.00	50
10.	FILE CABINET	NO	5	4,500.00	23
11.	ALMIRAH (STEEL)	NO.	3	7,000.00	21
12	ELECTRIC (FAX (56")	NO.	40	1,500.00	60
13	OTHERS				73
				TOTAL	490

#### ANNEX - XXII

## PROJECTED CASH FLOW STATEMENT

SOURCES OF FUND:					
PAID UP CAPITAL	63000	_ 0	0	0.	0
LOAN AMOUNT	L46667	0	0	0	0
NET PROFIT BEFORE TAX, INTEREST	0	79440 00	103398.00	109248.00	115293.00
COMM. BANK BORROWING	0	11412.4	2997.3	987 0	963.1
DEPRECIATION/WRITE OFF	0	17294	17294	17294	17294
INTEREST ACCRUED DURING CONSTRUCTION PERIOD	9600	0	. 0	0	0
TOTAL SOURCES OF FUND	219267	108146	123689	127529	133550

## ANNEX - XXII Contd.

# PROJECTED CASH FLOW STATEMENT

UTILIZATION OF FUND:					
CAPITAL EXPENDITURE	196650	0	0	0	0
PRILIMINERY EXPENSES	12854	O	0	0	0
INCREASE IN WORKING CAPITAL	0	17825.61	5958.59	1772.25	1795.50
INTEREST ACCRUED DURING	9600.00	0	0	0	0
CONSTRUCTION PERIOD	0	0	0	0	0
REPAYMENT OF LOAN	0	15626.70	15627.00	15627.00	15627.00
INTEREST PAYMENT	0	20832.95	19275.29	17369.46	15471.17
DIVIDEND PAID	0	0	0	0	0
TOTAL UTILIZATION OF FUND	219104	54285	40860.9	34768.7	32893.67
CASH SURPLASES	163.00	53861.2	82828.38	92760.3	100656.44
OPENING CASH BALANCES	0	163.00	54024.17	136853	229612.9
CLOSING CASH BALANCES	163.00	54024.2	136852.6	229613	330269.3

#### **DISCOUNTED CASHFLOW STATEMENT**

YEAR	CAPITAL OUTLAY	PRETAX PROFIT	NON-CASH EXPENSES	INTEREST EXPENSES	OTHERS INFLOW	NET OPRT. INFLOW
0 YEAR	219104					-219104
IST	17825.61	58610	17294	20830		78908
2ND	5958.59	84118	17294	19280		114733
3RD	1772.26	91878	17294	17370		124770
4TH	1795.50	99823	17294	15470		130792
5TH	1800	99823	17294	13600		128917
6TH	1800	83000	17294	11570		110064
7TH	1800	83000	17294	9540		108034
8TH	1800	83000	17 <b>2</b> 94	7510		106004
9TH	1800	83000	17294	5480		103974
10TH	1800	83000	17294	3450		101944
					48500	48500

NPV AT 25% (29,054.00)

LR.R (48%)

NOTE SALVAGE VALUE INCLUDED THE LAST YEAR CASH INFLOW

#### ANNEX - XXIII

#### **BREAK-EVEN ANALYSIS**

## SALES REVENUE (3RD YEAR) IN LAC TK. 4347

# 2. TOTAL PRODUCTION, ADMINISTRATIVE AND SELLING EXPENSES:

ITEM	TOTAL	VARIABLE	FIXED	
RAW AND PACKING MATERIALS	251761	251761	0	
WAGES AND SALARIES	22041	8816.4	13224.6	
STROES AND SPARES	2298	1838 4	459 6	
REPAIR AND MAINTENANCE	2298	1608.6	689.4	
CARRIAGE IN WARDS	1118	1118	0	
INSURANCE	890	0	890	
WATER, POWER, FUEL, GAS, LUB.	7745	3098	4647	
DEPRECIATION & WRITE OFF	17294	0	17294	
OTHER MANUFACTURING OVERHEAD	240	120	120	
ADMIN/GENERAL SALARY	4043	808.6	3234.4	
PRINT/POST/STAMP	180	12	168	
OFFICE SUPPLIES	220	36	184	
TEL/FAX/TELEX ETC.	240	48	192	
TRAVELLING	280	100	180	
AUDIT/CONSULTATION FEES	120	0	120	
MISC. ADMIN. EXPENSES	450	90	360	
INTEREST EXPENSES	19480	0	19480	
BANK CHARGES	8695	7825.5	869.5	
ENTERTAIN	240	96	144	
AD/PROM/DONATION EXPENSES	400	160	240	
MARKETING COMISSIONS	4347	3477.6	869.4	
FUEL/DIESEL/CARRYING	420	168	252	
UTILITIES/RENT	420	12	408	
CAR MAINT	120	18	102	
COMMERCIAL	175	0	175	
	345515	281212.1	64302.9	
PROFIT VOLUME		(S-V)/S =	35.31%	
BREAKEVEN SALES IN LACK TK. FIXED COST / P:V RATIO =				
BREAKEVEN POINT OF UTILIZED CAPACIT	`Y =		41.89%	
BREAKEVEN POINT OF RATED CAPACITY	=		33.52%	

## ANNEX - XIV

## FINANCIAL RATIOS

S.NO.	ITEM	2002	2003	2004	2005
I.	GROS PROFIT OF SALES	30%	30%	30%	30%
2.	NET PROFIT AFTER TAX TO GROSS SALES	18.62%	20.99%	21.42%	21.84%
3.	RETURN ON INITIAL EQUITY	100.08%	142.39%	155.30%	168.32%
4.	RETURN ON INVESTMENT	30%	43%	47%	51%
5.	PROFIT TO NET ASSETS	0.318772908	0.453843293	0.495081009	0.536467463
6.	DEBT SERVICE COVERAGE (TIMES)	2.77	3.62	4.01	4.46

# Calculation of Debt Service Coverage Ratio:

A.	INCOME:						
	PRE-TAX PROFIT	600.48	854.83	931.41	1009.87		
	ADD : DEPRICIATION/WRITE OFF	166.78	166.78	166.78	166.78		
	INTEREST EXPENSE	199.97	184.61	166.52	148.48		
	SUB-TOTAL	967.23	1206.22	1264.71	1325.14		
B.	DEBT OBLIGATION :						
	PRINCIPAL PAYMENT	148.72	148.72	148.72	148.72		
	INTEREST EXPENSE	199.97	184.61	166 52	148 49		
	SUB-TOTAL	348.69	333.33	315.24	297.21		

#### ANNEX - XXV

## **SENSITIVITY ANALYSIS**

## **INCREASE OF 10% RAW MATERIAL PRICE**

#### **EARNING FORECAST:**

ITEM	2002	2003	2004	2005
SALES REVENUE	3222.33	4068.62	4347.31	4619 24
COST OF GOODS SOLD	2486.75	3122.14	3350.89	3569.87
GROSS PROFIT	735.59	946.48	996.42	1049.37
GENERAL, SELLING AND ADMN. EXPENSES	130.50	151.05	160.53	170.24
OPERATING PROFIT	605.09	795.43	835.89	879.13
INTEREST EXPENSE	199.97	184.61	166.52	148.49
NET PROFIT BEFORE TAX	405.12	610.82	669.37	730.64
NET PROFIT AFTER TAX	405.12	610.82	669.37	730 64

#### FINANCIAL RATIOS:

ITEM	2002	2003	2004	2005
GROSS PROFIT TO SALES	23%	23%	23%	23%
NET PROFIT AFTER TAX TO GROSS SALES	12.57%	15.01%	15.40%	15.82%
RETURN ON INITIAL EQUITY	67.52%	101.80%	111.56%	121.77%
RETURN ON INVESTMENT	20%	31%	34%	37%
PROFIT TO NET ASSETS	0.215200837	0.324472314	0.35557716	0.388120053
BEBT SERVICE COVERAGE (TIMES)	2.21	2,89	3.18	3.52

# Calculation of Debt Service Coverage Ratio:

INCOME:				
PRE-TAX PROFIT	405.12	610 82	669 37	730.64
ADD DEPRICIATION/WRITE OFF	166.78	155.78	166.78	166.78
INTEREST EXPENSES	199.97	184.61	166.52	148.49
SUB-TOTAL	771 865576	962.209131	1002.674	1045 906
DEBT OBLIGATION:				
PRINCIPAL PAYMENT	148.72	148.72	148.72	148.72
INTEREST EXPENSE	199.97	184.61	166.52	148.49
SUB-TOTAL	348.69	333.33	315.24	297.21

#### ANNEX - XXVII

## **SENSITIVITY ANALYSIS**

## ON 5% INCREASE SALES PRIVE

## **EARNING FORECAST:**

ITEM	2002	2003	2004	2005
SALES REVENUE	3383.45	4272.05	4564.68	4850.20
COST OF GOODS SOLD	2260.68	2838.31	3046.26	3245.34
GROSS PROFIT	112277	1433.74	1518.42	1604.86
GENERAL, SELLING AND ADMN. EXPENSES	130.50	151.05	160.53	170.24
OPERATING PROFIT	992.27	1282.69	1357.89	1434.62
INTEREST EXPENSE	199.97	184.61	166.52	148.49
NET PROFIT BEFORE TAX	792.30	1098 08	1191.37	1286.13
NET PROFIT AFTER TAX	792.30	1098.08	1191.37	1286.13

#### FINANCIAL RATIOS:

ITEM	2002	2003	2004	2005
GROSS PROFIT TO SALES	33%	34%	33%	33%
NET PROFIT AFTER TAX TO GROSS SALES	23.42%	25.70%	26.10%	26 52%
RETURN ON INITIAL EQUITY	132.05%	183.01%	198.56%	214.36%
RETURN ON INVESTMENT	40%	55%	60%	64%
PROFIT TO NET ASSETS	0.420876629	0.583310033	0.63286348	0.68320425
BEBT SERVICE COVERAGE (TIMES)	3.32	4.35	4.84	5.39

## Calculation of Debt Service Coverage Ratio:

INCOME:				
PRE-TAX PROFIT	792 30	1098.08	1191.37	1286 13
ADD DEPRICIATION/WRITE OFF	166.78	166.78	166.78	166,78
INTEREST EXPENSES	199.97	184.61	166.52	148,49
SUB-TOTAL	1159.050255	1449.471138	1525,6655	1601 402
DEBT OBLIGATION:				
PRINCIPAL PAYMENT	148.72	148.72	148.72	148.72
INTEREST EXPENSE	199.97	184.61	166.52	148.49
SUB-TOTAL	348.69	333.33	315.24	297.21

#### ANNEX - XXVIII

## PROJECTED BALANCE SHEET

# ASSETS AND LIABILITIES

CASH BALANCE	9763	63624	146452	239213	339869
OTHER CURRENT ASSETS	12854	30680	36639	38411.3	40206.8
NET FIXED ASSETS	196650	179357	162062	144767	127473
TOTAL ASSETS	219267	273661	345153	422391	507549

## LIABILITIES AND CAPITAL

TOTAL LIABILITIES AND CAPITAL	219267	273661	345153	422391	507549
RETAINED EARNINGS		58609	142728	234607	334430
DEFERRED INTEREST	9600	8640	7680	6720	5760
PAID UP CAPITAL	63000	63000	63000	63000	63000
LONG TERM LIABILITIES	146667	132000			
SHORT TRM LIABILITIES		11412	14411	15397	16360

# **Gantt Chart**

# GANTT CHART Project Timetable and Status

Activities	Feb. 01	March 01	April 01	May 01	
1. Project Proposal					
2 Project Approval					
3 Idea Generation					
4 Theoretical Framework					
5 Prepare Questionnaire			9.		
6. Primary Data Collection					
7. Data Analysis					
8. Thesis Writing					
9. Final Review					
10. Printing & Findings of Error					
11. Final Submission Of Thesis					

# Bibliography

## Bibliography

- John A. Pearce and Richard B. Robinson JR. 1997, Strategic Management
- Readiness for the networked world, A guide for developing countries.
- 3 FY 1998 Country Commercial Guide. Bangladesh Report prepared by U.s. embassy Dhaka, released August 1997.
- Fax message of "The World TB" dated 28/01/99
- 5 Stanley B. Block, Fundamental of Financial Management.
- 6. George Foster & Srikant M Datar, Introduction to financial Accounting.
- Walter T Harrision, Financial Accounting
- 8 Horngren, Sundem, Introduction To Management Accounting.
- Roger H Harmanson, Accounting Principle.
- 10. Ray H. Garrision, Managerial Accounting.
- 11. www. Bd Research Com.
- 12. Search Engine
- 13. Attavista. com.
- Googie.com.
- 15. www.finance.com
- www.nyse.com/research.

May 02, 2002

Dr. Tanveer Ahmed Chowdhury Instructor, Department of Business Administration East West University

Sub: Submission of Final Project (Feasibility Study).

Dear Sir:

Here is the report on "A Feasibility Study on an Export Oriented Knit Wear Garments" that was assigned by you for the course *BUS-498* to fulfill the partial requirement of my BBA program.

I have done my level best to complete the report in time and with the quality of your expectation. The whole experiences of this project enabled me to get an insight in to the real life situation. I have really enjoyed working on this project. Hope the report will be meeting your expectation and standard.

I have tried to make the report a comprehensive one, within the given time. Any sort of suggestion regarding the report will be greatly acknowledged and I will feel gratified if my project serves its purpose.

I shall be available to answer any queries for clarification.

Sincerely,

Md. Jahangir Hussain Miah

ID No: 1998-3-10-068

BBA